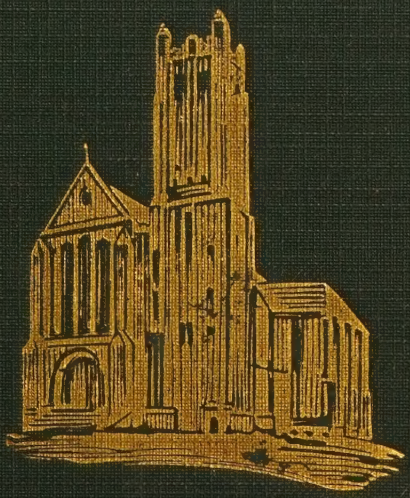
BUILDING THE HOUSE OF GOD

ELBERT M. CONOVER



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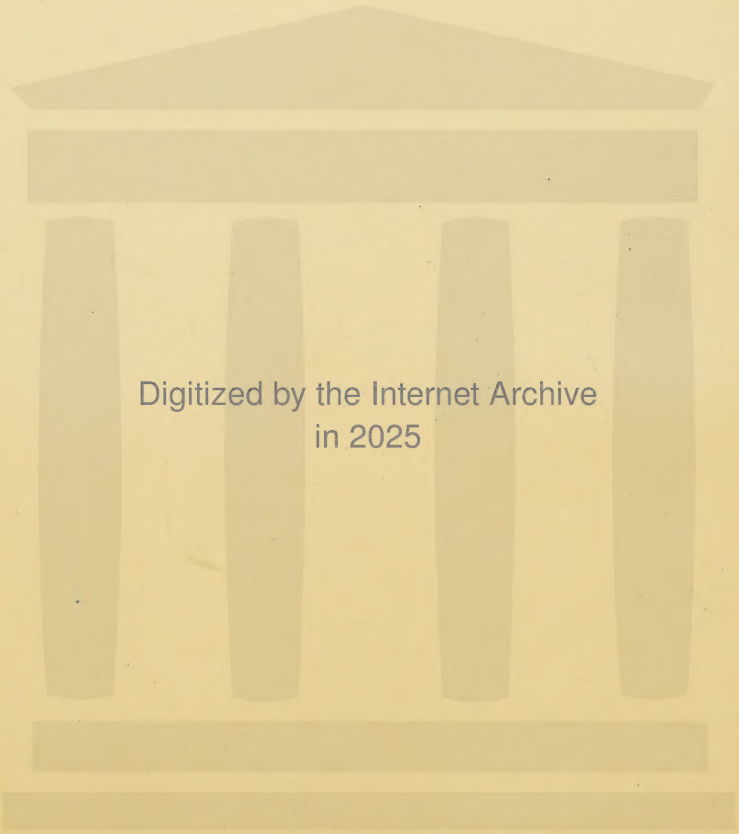

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CHURCH AT ARDMORE, PENNSYLVANIA
Erected 1926

BUILDING THE HOUSE OF GOD

By ELBERT M. CONOVER
Director of the Bureau of Architecture of the Methodist Episcopal Church

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In Honor of
My Father and Mother
Who Taught Me to Love
the House of God

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LEADERSHIP IN CHURCH BUILDING

THE experienced and wise pastor-leader of a great church-building enterprise, says that in spite of the tremendous difficulties involved in a building program there are few experiences in the ministry which are comparable in spiritual satisfaction.

This book is offered to ministers, architects, devoted laymen, and all who are engaged in the glorious and worshipful work of building the house of God in the hope that it may help them to find a noble enjoyment in their sacrament of service for coming generations.

The author is indebted to many, and especially to Walter H. Thomas, A.I.A., for words of encouragement and valuable suggestions. Thanks are due the Rev. Jay S. Stowell for reading the manuscript and to Miss Sara E. McBride for tireless work in collecting materials and preparing and correcting the manuscript.

E. M. C.

CHAPTER I

THE SIGNIFICANCE OF THE CHURCH BUILDING

The church edifice, a rendezvous of God with man, the visible representation of the dwelling of God with humanity, is a structure distinct from all other buildings, just as Christian worship is held to be on the highest plane of human experience. The church shelters and stimulates the exercise of holy worship wherein men realize the Divine Presence, and provides a center for fellowship and service expressive of the divine life in human tabernacles. The Christian church building is a marvelous contribution to human history. Temples of many kinds have been erected by men stirred by various ideals of worship. One of the instincts of man has been to build an altar, but the house of God, built by Christians, represents the coming of a religion of brotherhood, of divinely fired aspiration and fellowship with a good God. We are taught that God himself inspired the plans for the building and furnishing of the Tabernacle. How thrilling the account of the building of the Temple at Jerusalem! In troublous times the church became a sanctuary to the pursued and oppressed. Before its altar was kept the vigil from which great quests were followed. Kings acknowledged the supremacy of church over palace, and the poor found the church the one place where they might come into the presence of royalty divine. In building the churches great devotion was manifested, as at the wondrous cathedral at Chartres, where a thousand men and women harnessed themselves to carts and dragged stone and timbers to the site. The materialist may prate at evidences of superstition in building the ancient churches. Was it superstition that made

Michael Angelo, that great independent, work for long periods of time, lying upon his back, to beautify a place of worship? Rather, in this devotion of a strong-minded man to his task we see a type of consecration that speaks beyond the contemporary age, an example for our present swift times. Well may we emulate such constancy, and strive to bequeath to coming generations works that will inspire eternal ideals. Coleridge, standing before one of the great cathedrals of France, said, "No superficial emotion erected such a building."

A decree promulgated in Florence commanded that, "whereas it is the highest concern of a people of illustrious origin so to proceed in their affairs that man may perceive from their works that their designs are at once wise and magnanimous, it is therefore ordered" that the architects of the commonwealth prepare a plan for rebuilding the church. "This is not to be undertaken unless the design be to make it correspondent with a heart which is of the greatest nature because composed of the spirit of many citizens concordant in one single will." The city while engaged in a flourishing commerce gave such devotion to the building of the cathedral that the progress of its construction marked the stages of the city's prosperity for one hundred and sixty-six years.

To follow in the noble procession of church builders is a privilege to be prized. The building of a church is a holy enterprise, to be undertaken reverently and intelligently, be the structure a wayside chapel or a cathedral at the heart of a great city.

Vast treasure is being expended for church buildings to-day. In the midst of hurried, almost frantic, commercial building we are hiring architects and builders to turn from constructing garages and apartment houses to the holy task of erecting a church. Sometimes there is too little realization of the responsibility attendant upon the handling of funds consecrated to the high purpose of creating in material form an expression of Christian

idealism. For such a noble enterprise competent and reverent leadership and architectural service of corresponding quality are required.

The church is a difficult problem architecturally, for within its walls we must have a sanctuary, and provision for a seven-day-a-week ministry of religious education and fellowship. None less than this is the house of God.

There are many evidences that we are entering upon an epoch of church building in America that may exceed in extent some of the great historical periods of this endeavor. Can we equal in purposefulness and intelligent idealism the achievements of the past?

CHAPTER II

THE LANGUAGE AND SPIRIT OF ARCHITECTURE

INDELIBLE and undeniable evidences of the aspirations, ideals, and motives of every age are left in its architecture, which of all the arts is closest to human life. Its work confronts us everywhere. One who erects a building has a responsibility toward his neighbors, for he compels all who pass to view his work whether of beauty and orderliness or a thing of ugliness. Thus ugliness in a building is iniquity.

"Art is the measure of civilization," says Doctor Cram. It is a mighty ally in the promotion of human culture, in the search for more abundant life. In its highest manifestations art is the expression of religious values and motives. It is a most forceful agency for spiritual expression. Christian architecture, the queen of the arts, witnesses the transition from the material to the spiritual. The evidences of Christian reality in the fine arts, in painting and architecture, aided Christianity mightily in winning the allegiance of the civilized world, becoming itself the mark of civilization. Religion needs the arts to be impressive, to cultivate reverence, symbolize truth, stir the imagination, and stimulate resolution. The aim of religion is not only to convert and redeem but also to develop unified and devout personality. That Protestantism has lost immeasurably by its neglect and exclusion of the ministry of art is now so generally recognized that we need not add to the consequent lamentations. We may hope that the world will not have entirely turned away from the church to other agencies for that ministry to the soul that is possible only by art in its

finer expressions. The soul of man was made to dwell in the beauty of holiness. Ugliness is repulsive and exclusive of the divine realities that seek human dwelling places.

The fine elements in the Christian religion—truth, goodness, harmony—are effectively expressed in art. The attention is caught and held most potently by these representations in sound, color, or form. Art is the means for the most intense form of expressing the inner life of man. Its language is universal and unifying.

Protestant churches are beginning to realize that the language of the Spirit is to be spiritually discerned. There are many indications that the adoption of art as an aid in religious education and culture will be rapid and sweeping. Textbooks on religious education now devote chapters to the study of religious art, including the criticism of church architecture. The criticism and appreciation of art have become recognized as essential subjects in public-school and church-school curriculums. We surround our children in the elementary department rooms with products of real art rather than the grotesque representations customary until a few years ago.

One may well believe that a generation will rise to condemn some of the crudities in our church architecture and worship. Ugliness, even if consecrated, will not be forgiven. The æsthetic emphasizes the appreciation of the beautiful and accords with its principles and is not properly to be divorced from the spiritual. Some people have left the church, feeling that it did not concern itself with the practical affairs of everyday living; others have withdrawn because the church failed to minister to the æsthetic nature which to many is vital to the spiritual. The ministry of art is very practical. The man who is living the more abundant life is the more valuable and effective man. An environment of good architecture is conducive to thoughtful living. There are those who object to any apparent addition to the cost of a building for the sake of

improving its appearance, but they will not offend their neighbors by flaunting ugliness in their own personal appearance. It is incumbent upon everyone who loves his country to develop his interest in the arts and contribute to the raising of public standards of taste and fitness in architecture. Thus will he aid in making our country a land where happiness, health, and peace of mind shall more and more prevail, and in bringing nearer the kingdom of God. That the American churches are appreciating the ministry of art is evidenced by an encouraging interest found in almost every section of the country. New realities are being discovered and enjoyed. Prejudices are being broken down. On every hand helps to worship and more complete living, formerly ignored, are now being used. This does not mean that those interested in the artistic are merely imitators. They are reaching out for better worship and for an architecture more in keeping with the fine idealism that characterizes our holy faith.

The Appreciation and Criticism of Architecture

The leader in building the house of God should steep himself in an appreciation of the queen of the arts—religious architecture. He should become fired with the desire to lead the people into the rich personal experiences possible in a church-building enterprise. One who addresses himself to the study of architecture enters upon a fascinating spiritual journey on which he will meet with both pain and pleasure—pain upon viewing the evidences of unintelligence and cheapness, for all these characteristics of our living are plainly revealed in the buildings we erect; pleasure as he enjoys the excellencies of good architecture whether it characterize a roadside cottage, village chapel, school, cathedral, or great office building. The ability to recognize and distinguish the various elements of beauty, character, and interest in a building adds much to one's personal development. A fine by-product of our church-building enterprise in recent years has been the cultural

benefit derived by members of churches through the study of architecture as their plans progressed.

Some brief suggestions may invite one to enter upon a greater enjoyment of architecture and to follow its study in more detail through some of the books devoted to the subject.

What should we look for in a building? First, for what use is it intended? Is it a schoolhouse, library, cold-storage plant, or the visible expression of the presence of God in the community? Has its purpose been met, and in as pleasing a manner as possible?

If the building is a church, the exterior design should express the aspirations and ideals of the faith to which it is related. The exterior, whether of a farmhouse, school, or church, should have a sense of balance and harmony. Proportion, scale, harmony, and balance in a building means that the several parts are so related as to give a pleasing impression. A door, fine and well proportioned in itself, may be out of harmony and out of scale as related to the rest of the building. In sculpture the finger of an infant on the statue of a giant would be called grotesque, yet blunders just as apparent are committed all too frequently in architecture.

Truth

In good architecture, there is no attempt at false effects. Classic columns should not be supported by plate-glass show windows. Painted tin should not pose as stone work. Boards an inch thick should not be nailed on the outside of plaster walls to imitate honest old English open-wood timbers. Plastered walls should not be marked off to simulate stone, nor plaster groins used to falsify real vaulting.

Lights, Shades and Color

A good architect will take into account the effect of shades and shadows and secure contrasts and notes of emphasis, freeing the design from a deadly monotony.

Ornament

An honest and logical use of ornament is highly important in church building, and an entire book might be devoted to this interesting subject.

Criticism of Plan

The plans proposed for a building should provide an orderly and convenient arrangement of the rooms and facilities for the activities required, with easy means of communication. A well-arranged plan ought to lie out logically like a well-arranged book. A well-studied plan will make possible a good exterior design.

Other elements to be studied in the enjoyment of architecture are: the impression of refinement, restraint and repose; of strength and vitality; the disposition of solids and voids; the marks of balance and symmetry.

CHAPTER III

BUILDING THE HOUSE OF GOD THROUGH THE AGES

The construction of a church edifice is not an isolated enterprise. It is related to the continuous expression of a sublime faith as evidenced in architecture, and is linked with the great company of those who through the ages have pursued a noble and inspiring calling. One should have at least a survey of architectural history in order to appreciate the significance of his own task. Our contribution to the history of mankind and toward the working out of humanity's high destiny, cannot be worthy of our opportunity and position if we ignore the accomplishments of those into whose labors we are to enter. A study of the history of architecture should stimulate us to a high degree of attainment. Knowing that the generation leaves its record in its architecture, we cannot hope to escape the condemnation of those that follow us if we fail here. Bad books and pictures mercifully can be burned or allowed to gravitate to the junk shops, but unworthy building stands glaring, condemning, shaming the generation that has gone and revealing it ludicrously to the mind of a more cultivated age. The church builder should have some acquaintance with the principal historical styles and at general impression of the spiritual meaning of each. He should know something of the movements of mankind and the aspirations and faiths of peoples as reflected in their architecture.

Early Religious Architecture

The stream of architectural expression which interests the present-day Christian builder had its beginning in

Egyptian construction as early as 3700 B. C. The great works of the ancient Egyptians, including the pyramids and other magnificent tombs and temples, reveal the importance given to the thought of death and the adventure beyond. The temples, with massive halls and columns and low, mysterious chambers and shrines, indicate the interest of the ancients in providing a dwelling place for their gods and the service due them. Rutter, in his book *The Poetry of Architecture*, calls this period of architectural history the period of fear. The Temple of Ammon at Karnak —1550 B. C.–323 B. C.—has a marvelous hall whose stone roof is supported by sixteen rows of great columns terminated by capitals of the lotus-bud type. The massive scale of the temple, the forest of columns, and the clerestory lighting scheme produce an awe-inspiring effect.

Chaldean and Assyrian architectural remains are of little significance for the historian of art, except to tell of the massive scale of their pillars. In Babylonian architecture of a later period, large mural pictures were formed of enameled face brick of various colors. The Persians 536 B. C. to 430 B. C. built palaces of splendor and majesty rivaling the vast marvels of the Nile valley. Probably because of the outdoor worship of fire and sun, temples were of small importance. The Phœnicians, the world's great traders, left no significant architectural ruin.

The Hebrews lavished their architectural ability upon the Temple and the masonry required to give it the great supporting platform. The careful directions given for building the Tabernacle, the wonderful description of the organization for building the Temple and its elaborate service of dedication indicate the importance of religious buildings in the minds of Old Testament leaders.

The Classical Period in Architecture—the Greek Expression

The achievements in the type of Greek architecture in which we are interested date from 700 B. C. to 146 B. C. but the masterpieces were constructed between 480 and 323

B. C. The Greeks aimed at perfection in whatever they undertook. Their architecture exhibits perfect adjustments of the elements they employed. They did not assail the heavens with the refinements of the arch and vault nor attempt to carry roof thrusts with the flying buttress. The Parthenon, the masterpiece of Greek architecture, is faultless in design. The refinements of its detail and the beauty of its sculptural treatment wonderfully illustrate the high standard in the art of architecture reached in its construction.

Roman Architecture

The Greek influence in Rome is quite evident in its architecture. The Roman builders lacked in fine artistic expression but excelled in the genius of organization. They brought engineering into the service of architecture and employed the arch and vault on a grand scale. Richness of decoration rather than refinement of design gave character to their work. The principles of Roman architecture became the source of the Romanesque and vitally influenced the Renaissance architecture. The era of Roman building left its impress throughout the far reaches of the empire from Asia to Britain. One is glad to admire the beauty, symmetry, harmony, and artistic correctness of the classic temples. To the people of the times they were the houses of God. But we cannot find in them sufficient expression of the aspirations and ideals of Christianity. They represent the natural beauty of the earthly and sheltered the idols of Pagan ideals.

Early Christian Architecture

In all human history there is no record so striking as that of the rise of Christianity and no phenomenon so outstanding as the rapidity with which it was diffused throughout the civilized world. It has inspired the building of great monuments and gives in its architecture one of the invaluable enrichments of human living. The

persecutions and edicts of Roman emperors prevented the early building of Christian churches. Often the homes of the more affluent members of the Christian communities provided shelter for their meetings. The story of the Christian meeting places and the Christian art in the catacombs is an alluring one. We cannot relate it here.

The Roman basilicas, or public civic buildings, provided the early Christian builders with a rather practical example for the early churches. Old columns and material from the ruins of ancient buildings were used. The basilican style of church generally had a lofty nave separated by rows of columns from single or double side aisles with a clerestory wall pierced by windows. The term "basilica," designating a building dedicated to the service of the King, was applied to Christian churches in the fourth century, the implication being that these buildings were devoted to the King of kings. In early Christian times church edifices were called *domus dei*, meaning "the House of God," *domus ecclesiæ*, "house of the church," *domus columbæ*, "house of the dove," *oratories*, "houses of prayer"; or *μαρτυριον*, "memorial to a martyr."

An end arcade called the narthex was used by penitents; at the further end was the sanctuary or apse. The sanctuary provided space for the choir with two reading desks or *ambones*, one for the gospel and one for the epistle. It was inclosed with low screened walls called *cancilli*, from which we get the word "chancel." Sometimes a triumphal arch marked the beginning of the sanctuary. In the sanctuary was also the high altar covered by a canopy. Wherever possible the Christians decorated the churches in an elegant manner with mosaics, paintings, and fine marbles. The earliest churches faced east.

Baptistries were built in some places as separate buildings, usually one baptistry for a city. The baptistry of Constantine in Rome (430 to 440 A. D.) was built near the Lateran Church by Sixtus III. It is octagonal, the roof being supported by a two-story ring of fine marble col-

umns taken from old pagan buildings. After the sixth century baptistries were generally replaced by a font in the church vestibule. This position is still recalled in many modern churches by placing the font near the entrance indicating the ceremony of baptism as the entrance to the church.

Since the primitive Christians washed before entering the church, as a symbol of purity, a vessel for the purpose was placed in the porch. Baths were important appendages to the larger churches.

The campanile, or bell tower, dates from the early Christian period. There was a wide use of pictures, emblems, and symbols to represent the various aspects of the Christian faith. Fine ornamental work in ivory and precious metals was used on chalices, patens, crosiers, and other appurtenances of the Christian ritual.

Byzantine Architecture

Byzantine architecture developed after Constantine in 324 A. D. transferred the capital of his empire to that city. Both brick and stone were used. Crushed pottery, tiles, or brick were used in the mortar, much of which still remains. The dome became the significant feature of the buildings, sometimes many domes being placed over one structure. Brickwork was used in various patterns and bands. Internal surfaces were covered with marble, mosaic, or fresco decoration.

The outstanding example of Byzantine architecture is Santa Sophia (Holy Wisdom), the cathedral of Constantinople, built 532 to 538 A. D. by Justinian, who exclaimed, "I have surpassed thee, O Solomon!" Now it is a Mohammedan mosque, but let us hope that the praises of Christ will again ascend into its incomparable vaults. The building is dominated by a great dome rising 180 feet from the ground. The interior glows with wondrous beauty of colored mosaics, marble columns, and stone of many colors. Several other fine churches were built in Constantinople,

twenty-one of which still remain though diverted to other uses. The Byzantine influence is noticeable in Saint Mark's Cathedral, Venice, one of the most remarkable and famous edifices ever erected by Christian people. It was founded in 864 A. D. and rebuilt between 1042 and 1071. It has five domes; the central one forty-two feet in diameter. The interior is decorated in gorgeous marbles and mosaics, the front with 500 columns of fine marble.

Influence of the Byzantine Architecture

Great honor should be given Byzantine Christianity for erecting a bulwark against Huns, Goths, and Saracens until through internal faults this civilization went down before the Turks in 1453. The style influenced the Saracenic and Armenian and then the Russian architecture. Western and northwestern Italy and parts of France and Spain felt its influence.

The Byzantine order does not seem to be extensively used as an inspiration for modern building. The Westminster Roman Catholic Cathedral in London (1895–) is one example.

Early Armenian Christianity

From the sixth to the thirteenth century the Armenians built notable churches and monasteries, several of which were founded by Saint Gregory. A concrete and stone domical church built in the seventh century still exists (Saint Gaina).[1] The Armenian Church law demanded that only a bishop orthodox in faith could design a church. All other plans must be destroyed unless submitted for approval, revised, and resubmitted: "thus shall the designing of the church be blameless."

Early Mediæval and Romanesque

The expectation that the year 1000 would witness the end of the world, and the troublesome times generally,

[1] Short's *House of God.*

prevented any considerable building for a long period. But after this a writer said that the world seemed to be putting on a new white robe of churches. The monastic orders were responsible for a tremendous development in building. Their establishments required churches, cloisters, refectories, infirmaries, guest houses, work shops, gardens, etc., and the monastic community sometimes became the nucleus for large towns and larger church or cathedral establishments.[1]

As the nations of Europe developed, the architecture in each country took on certain definite characteristics, while a decided and notable Christian influence dominated the whole.

The Romanesque style is marked by the round arch and massive construction. The dome of the Byzantine was sometimes retained as in the cathedral at Pisa (built 1063 to 1092). In the Romanesque, there is a combination of the basilican and the Byzantine types with the rounded arch, exterior arcade work, and other elements developed during the awakened artistic life. The floor plan of the cross is the basis of the Romanesque. The apse, or chancel, undergoes further development into the sanctuary from which the laity was excluded except during communion.

During the Romanesque period there was a development of building crafts and lodges, or guilds. Most builders were not forced to work as serfs. A lodge of freemasons would work on one building for decades. In one instance a family of masons worked on the same cathedral for two hundred years.

The University Prints[2] include pictures of several excellent examples of the Romanesque. For example: Saint Miniato, Florence, 1013. Raised chancel similar to early basilica. Marble columns taken from earlier buildings. Marble veneer. Wooden roof richly decorated. Black-and-white marble exterior. Saint Ambrogio, Milan, 1140, founded by

[1] See R. A. Cram, *The Ruined Monasteries and Abbeys of England.*

[2] Newton, Massachusetts.

Saint Ambrose, fourth century. Here Saint Augustine was baptized and Theodosius was excommunicated. Lombard kings and Germanic emperors were crowned here. Excellent Lombard type. Finely ornamented pulpit or ambo. An interesting atrium, or outdoor court. Saint Zeno, Verona, 1139. A great rose window. Clerestory. Detached campanile with alternate course of marble and brick with high pitched roof. Exterior arcade work. Saint Michele, Pavia, 1188,The Baptistry at Cermona, 1167, and many other examples of this wonderful advance in church building and art should inspire one to enter upon a more extensive study of the Romanesque period. Monreale Cathedral, in Sicily, 1174, is one of the most glorious examples. It is a combination of the early Christian basilica and the Saracenic influence. It has an eastern apse with raised choir. The interior walls are richly covered with mosaics representing biblical scenes and there are marvelous cloisters, remains from a Benedictine monastery.

Christianity, like Roman civilization, marched along the great highways of France. It was established in the valley of the Rhone in 35 A. D. In the year 55 churches were founded at Arles (Limogenes), Toulouse, etc. Romanesque architecture in France extended from the eighth to the twelfth centuries.

In France, the Abbaye-aux-Hommes at Caen, was established by William the Conqueror in 1066. It is one of the many fine churches in Normandy resulting from the prosperity of the Norman dukes. There are nine spires; these and the vaulting and other fine elements indicate approaches to the Gothic style. In Caen, in 1083, the wife of William the Conqueror founded the Abbaye-aux-Dames, another excellent example of the rounded-arch construction. At Cluny the Abbey Church (1089–1131) is the longest in France. It has a chevet (or crown) of five apsidal chapels. Poitiers and Saint Sernin in Toulouse, Saint Front in Perigueaux, and many other inspiring buildings marked the stages of the Romanesque culture in France. Worms

(1110–1120) with twin circular towers, the Church of the Apostles in Cologne (1220–), Spires Cathedral, and Saint Gerreon in Cologne are outstanding examples of the Romanesque in Germany.

Early Church Building in England

Before tracing the development of the Gothic order,

THE CHURCH, UFFINGTON, ENGLAND
Octagon Norman tower, upper part a later restoration. Note excellent porch with stair-tower to chamber above.

we will notice briefly the very interesting rise of church building in Britain. Later we will devote a chapter to the English Parish churches and cathedrals. We need not remind the reader of the beautiful legends of the bringing of Christianity to Britain, the story of Joseph of Arimathæa, the legends of the Celtic missionaries, and the account of

Gregory's interest in the Angles, whom he saw in the Roman slave market in the fifth century. Roman soldiers, officers, and merchants aided in carrying the new faith to the isles of the north. Foundations of a temple thought to be a Roman Christian church have been excavated at Silchester. Numerous towers and crosses mark early places of worship at spots where pagan shrines formerly stood. The first churches were of wattle or of woven osiers and daub. Wooden churches thatched with heather had beaten earthen floors on which a mat of rushes was laid in the autumn. Evidently, many Saxon churches of wood and stone were built from 600 to 800 A. D., but there was a lapse into barbarism during the Danish invasions in 800 and 900.

In 597 Saint Augustine baptized Ethelbert, king of Kent, and ten thousand of his followers at Canterbury. According to the fascinating story, a Roman idol house here had been reconsecrated for Christian worship by the king's wife who had previously been converted. To-day, ages later, we are thrilled by the sight of Canterbury Cathedral, one of Christianity's noblest churches.

Norman (Romanesque) architecture entered England prior to the Conquest. Following the Norman conquest came a period of extensive building. Lanfranc, born in Pavia, Italy, in 1005, migrated to Normandy. He established a monastery at Bec, a great center of learning, and as chief clerical adviser to William the Conqueror he had much to do with the great churches at Caen. His buildings in Normandy became models for English churches. The fine limestone quarries at Caen supplied much of the stone used in England, particularly at Canterbury, Winchester, at Westminster Abbey, and for many parish churches in the southeastern sections. At places in England where praying houses and modest churches had been established for centuries, Lanfranc and Norman builders erected churches of massive and magnificent construction. These were enriched with mural paintings, tiled pavements, colored ceilings and windows, wonderful carved fonts and

curtain hangings. Within a century "The land was covered with churches small and great" (Bond, *Gothic Architecture in England*). The population of England was then only about four million five hundred thousand. Their accomplishment in building so many churches appears therefore most remarkable. Many of these churches have perished but many others have been rebuilt or enlarged in the Gothic style. In some the Norman work appears very plainly and adds to the glamour of the buildings. In Winchester Cathedral the clerestory and largely the transepts are plainly of Norman work. At Iffley, near Oxford, a Norman parish church still exists in its entirety in fine preservation and is in constant use.

Summary of the Romanesque Architecture

The Romanesque style was in vogue between the decline of early Christian art and the rise of the Gothic (about 1000 to 1200 A. D.). While Roman in origin it included features drawn from Byzantium, Sicily, Moslem-Spain, Armenia, and Mesopotamia. It is characterized by massiveness, heavy walls without buttresses, round arches, and highly ornamented doorways. It represented the church at a period of great power and prosperity.

The Rise of the Gothic Architecture

A marvelous age of religious enthusiasm found its noble expression in an architecture evolved and developed in a most fascinating manner. Country, clime, and circumstance affect this expression, but there seemed always to be a driving force and compelling spirit in man that expressed itself in this ever aspiring architecture. The freedmen of the French communes found the massive walls of the Romanesque inadequate to express the surge of ideals and emotions which were stirring the people with an almost fanatic religious energy. Ever striving for the noblest possible expression in the greatest of arts—architecture—which commands the service of all the arts, men

raised vault and spire to the highest point of refinement, seeming to defy the forces of gravitation until they ventured too much and at Beauvais, in 1294, a great vaulted choir crashed to earth. (The present glorious transepts and choir of Beauvais with a "halo of chapels" were built from 1225 to 1568).

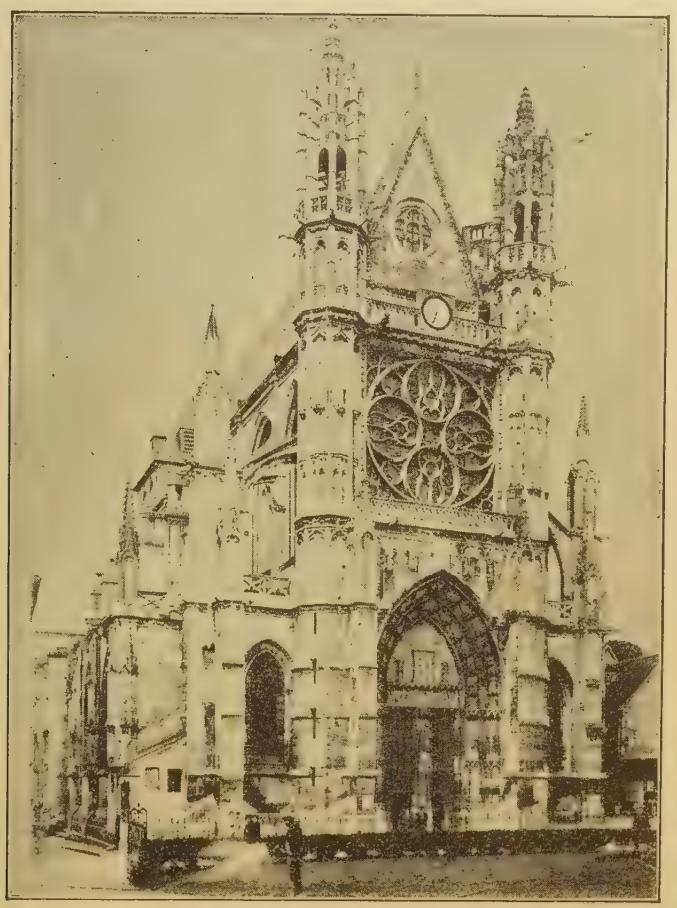
Cathedral at Tours, France

"The Gothic Cathedral," says Short, in the book, *The House of God*, "expressed the energy which drove all western Europe to the crusades and created the great orders."[1] Schopenhauer spoke of Gothic architecture as having a mysterious and hyperphysical character indicating "unknown, unfathomed, and secret ends."

The term "Gothic" came into use during the eighteenth century as a term of reproach used by those who, Doctor Cram says, were "self-sufficient amateurs of the Renaissance" and applied this term "to an art they had inherited but could neither appreciate nor revive."[2] It describes the work of several hundred years in the development of design, structure, and plan into one glorious unit. As compared with the Greek temple it soars and aspires above the merely earthly as the Christian faith aspires to the eternal. The dominating line of the Greek temple is horizontal, whereas the dominating line in the Gothic is vertical. The Greek temple was a work of fine

[1] Reprinted by permission of The Macmillan Company, publishers.
[2] Reprinted by permission of Marshall Jones Company, publishers.

art, the Romanesque church a mighty fortress of imperialistic hierarchical power, while the Gothic church is a Te Deum Laudamus in stone. This style is marked by the



CHURCH IN VERNON, NORMANDY
An interesting illustration of the French Gothic.

pointed arch, greater window space, spires of much splendor, the walls less massive and reinforced by buttresses.

Probably nothing in history has been more cruelly

misrepresented than Gothic architecture. To-day a contractor or untrained architect builds a church as stupid and soulless as an icehouse and then because it has a few badly designed and illy proportioned pointed arches, terms the building Gothic. Many have tried to imitate ancient work without having sufficient taste and intelligence to copy the best examples, for indeed the Gothic had its decadent periods. To build in the truly Gothic spirit to-day one must enter into that mystic devoted mood to express through his architecture the best of Christian ideals with a result which will be strictly modern and yet as truly Gothic in spirit as the notable buildings of the thirteenth and fourteenth centuries. To coldly imitate certain buildings constructed in the thirteenth century is a sign of spiritual poverty. There are signs that we have entered into what portends to be a very significant period of Gothic revival, for thoughtful people feel that the Gothic type more truly expresses the idealism one expects to find in a Christian church. For all this we give thanks and take courage, but, if architectural design does not come from lives of devotion and courage motivated by anti-materialistic idealism, we will have a tragic farce rather than a revival of a noble art.

The Development of the Gothic in France

The religious fervor of the thirteenth century was manifested in France by the opposition to the Saracens, by the crusades, and by the erection of many great cathedrals. The tremendous building activity wrought a transformation in the appearance of the country comparable to the time when Europe was first covered with railroads. The Gothic style in France lasted approximately from 1160 to 1500 and began notably with Notre Dame in Paris (1163–1235), a magnificent church designated the tomb of the Romanesque and the cradle of the Gothic. Its splendid rose window forty-two feet in diameter is only one of the many marvelous parts of this great building. Other examples of the

French Gothic work of about the thirteenth century are: Amiens, full of splendor with marvelous carved woodwork; Laon; Rouen; Beauvais (1225–1568); Bourges (1190–1275); LeMans, with a Romanesque nave and vast choir and a chevet with thirteen fine chapels; the church of Saint Louis in Paris and Saint Chapelle, where one has the

Apse of the Church of Saint Saviour in Petit Andeley (Eure), Normandy

sensation of being inclosed in a great jeweled casket. Rheims (1212–1241) was the coronation church of the kings of France and the center of French history for two hundred years. Here Joan of Arc crowned Charles king of France. Its rose window is forty feet in diameter. The nave is

grand in the extreme. There is a chevet ring of five chapels. Although struck more than two hundred and fifty times during the World War, its wonderful and glorious glass entirely blown out and the roof destroyed, the walls remained intact. Now the building, having withstood the awful ravages of war, has been repaired and reopened.

FRENCH PARISH CHURCH (VATTEVILLE)

One of the many very interesting examples of the French parish church. Their interest is greatly enhanced by striking variations marking various stages when the edifice was constructed. Note Romanesque windows in the nave and later Gothic of the choir. Note excellent carved stonework and gargoyles on tower.

May it be the dwelling place of peace and holiness for an epoch of glorious history!

The visitor to France should not fail to visit the Cathedral at Chartres, one of the superb witnesses of heroic devotion to a sublime enterprise (see page 15). Here the glorious glass is intact throughout almost the entire building.

During the building of the great French cathedrals and

churches the craftsmen and master masons occupied well-recognized positions in the work and came to supplement the work of the trained monks who devoted their lives to the building of the house of God. In the windows at Chartres there are pictures of these builders at work and in an old record we may read "Jean, son of Vital, the clever and faithful

Interior Saint Ouen Church in Rouen

carpenter of the church, who always worked with love and zeal at the work of this church" (*House of God*, Short).

The parish churches of France, particularly in Normandy, possessed great charm and variety of interest. A better acquaintance with them should contribute much to an improvement in the architecture of our town and small city churches.

The Gothic Architecture in Spain

The Gothic order, though modified in this interesting and mysterious country, reached a remarkable state of development. It was much influenced by the French. On account of the climatic need for small windows and thick walls some large Gothic windows were later blocked up. Everything Moorish was considered repulsive to the Christian, but the Moorish influence is evident in excessive ornamentation. The history of Spain as indicated by its architecture induces a different view of the people from that received from history written only in terms of the intrigues of politicians and wars of the kings. In many places the church buildings give evidence of a wealth of merit in the Spanish people. The Spaniard considered himself a valiant champion of Christianity. In her churches Spain raised a bulwark against the Saracen.

CATHEDRAL AT AMIENS, FRANCE

In Seville the people said, "Let us build such a vast and splendid temple that future generations will say of the men of Seville, 'They were mad.'" Bishops and clergy gave half of their living to the building fund. The enterprise resulted in the third largest church in Europe. In Toledo (1127–1493) there are wonderful glass, beautifully carved choir stalls, five aisles and several side chapels. Barcelona (1298), with a chevet of nine chapels and fine cloisters, was finished in 1450. Gerona

(1015–1458), with the widest Gothic vault in Europe, and other cathedrals, churches and chapels, compel our admiration. Ferdinand and Isabella were married in an interesting small parish church.

In Belgium

Antwerp Cathedral (1352–1411) is the most significant church in Belgium. Its tower, 400 feet high, is marked by the more flamboyant style of the later period in Gothic (1422–1518). Brussels-Saint Gudule is 362 feet long. This church is famous for wonderful stained glass. Unfortunately the World War, terrible devastator of art, culture, and all fine reality, demolished the cathedrals at Ypres, Milanes, and scores of churches. In Tournai (1066–1338) we find three stages of construction illustrating three periods: the nave in Romanesque, the transepts of the transition, and choir and chevet fully developed Gothic.

In Holland, the Dutch love for simplicity gives us a less varied architecture. Haarlem and Utrecht Cathedrals, plainly built of brick, illustrate a dislike of color and ornament and lack inspiration.

Germany

Germany rather tenaciously held to Romanesque methods with massiveness and low proportions, but French models finally dominated. German builders developed great skill of handicraft, displayed in intricate window tracery and complex moldings.

Cologne Cathedral, a magnificent example of the romantic in architecture, was French in plan and illustrates the leading characteristics of several notable French churches. Begun on a tremendous scale in 1270, it was completed on the original design in the nineteenth century. It covers 81,000 square feet, has two towers, each 500 feet high.

In Austria, Saint Stephens-Vienna, 358 feet long, is the outstanding example.

Scandinavian buildings exhibit plainness, simplicity, and solidity.

Italian Gothic

On account of the lack of national unity at the time of the great period in Gothic building, there was no general development of the Gothic in Italy. It was merely an imported fashion during the period from 1200–1450. The brilliant climate demanded thick walls, small windows and flatter roofs, but, more than this, the classic tradition prevented any high development of the Gothic before the Renaissance influence prevailed.

Milan (1388–1485), which next to Seville is the largest mediæval cathedral, is the outstanding example. A gleaming mass of white marble with lofty tracery windows, flying buttresses and hundreds of pinnacles, it is thus characterized by Tennyson:

> "O Milan, chanting quires
> The giant windows blazon'd fires
> The height, the space, the gloom, the glory
> A mount of marble, a hundred spires."

Here at one time 250 stonecutters were carving pillars and pinnacles. There are more than 3,000 statues—many of heroic size. We could not to-day mobilize such an army of skilled and devoted craftsmen as were employed on the scores of churches arising in Italy during the fourteenth and fifteenth centuries.

Florence

In Florence, in 1296, the city council decreed that a church worthy of their wonderful city and of their great God should be constructed. The marvelous dome, indicating the beginnings of the Renaissance, was designed by Brunelleschi. The campanile, by Giotto, 275 feet high, paneled with beautiful colored marble, and the great doors, are outstanding features. The front was not completed

until 1887. The notable baptistry at Florence was originally built in the Romanesque style and altered during the thirteenth century. Lorenzo Ghiberti (1378–1455) spent fifty years on the marvelous bronze doors.

In a book of moderate size we cannot venture even to list the notable churches of Italy, to say nothing of the wealth of art work in pulpits, baptistries, doorways, altars, monuments, and reredoses.

The Renaissance

This great humanistic movement, the Renaissance, traceable in great part to the enthusiastic study of the classics, is emphatically marked in the architecture of the period, and as many think, not to the advantage of Christian architecture. The stamp of the classic and its close relation to pagan art make us question whether the Renaissance style of architecture is the most appropriate to Christian ideals. The style quickly arose in Italy, where the Gothic had not gotten a firm hold. Great activity of church building took place in Italy in 1475–1490.

The culmination of Renaissance architecture was reached in Saint Peter's, Rome, begun in 1506, completed in 1604. Twenty architects worked on the building at different times. Michael Angelo was at one time the master of the works. The central nave is 650 feet long, the lantern 405 feet high. While stupendous and overwhelming it lacks the finest proportion and scale. With its dome and Greek cross plan it became a prototype for many Italian churches.

The Renaissance in Italy was followed by a period full of extravagance and ostentation known as the Baroque and Rococo period. Unfortunately, this period of bad taste lasted two centuries, with here and there an exceptional and commendable example, such as Santa Maria della Salute in Venice (1631). During this time some excellent churches were illy and cruelly remodeled. It was fairly demonstrated that a revival of classic art could not succeed.

In France the Renaissance in architecture appeared about

1475, but church builders clung more tenaciously to the Gothic. Under Louis XIV was planned the Hôtel des Invalides, or asylum for veterans, in Paris, now the burial place of Napoleon. Its chapel and dome make it a masterpiece of Renaissance architecture. The domical church of the Pantheon in Paris, begun in 1755, with a dome 265 feet high, while very wonderful and impressive, may be characterized as coldly and mechanically perfect in its classic style.

While the Renaissance architecture may offer stimulating models for civic and institutional buildings, the church builder feels that the style falls far short of the highest note for a Christian expression in architecture.

In England the Renaissance development was partially due to the employment of Dutch and Italian artists. Inigo Jones (1573–1652), called the English Palladio, almost venerated the Italian masters of classic design. Palladio was an Italian (1518–1580). The Palladian window in our American Colonial or Georgian architecture indicates the longevity of his influence.

The greatest successor of Jones was Sir Christopher Wren (1632–1723). The great fire in London destroyed the fine Gothic Cathedral of Saint Paul's and many churches. Saint Paul's was rebuilt by Wren from 1675 to 1710, on the classic style. It is a massive and overpowering building 480 feet in length. The dome is 360 feet high. Saint Paul's has been criticized as lacking the finesse and good proportions one would hope to find and would be more likely to find in a Gothic church. Just now many millions of dollars are being expended in correcting and repairing structural damages, although it was built hundreds of years later than the Gothic cathedrals. Wren was the inventor of the Renaissance type of steeple, in itself a beautiful thing, and in many varieties it crowned most of the fifty-three churches built by him.

The Anglo-Italian style continued in use throughout the eighteenth century. Hawkmoor and Gibbs were among its leading exponents. Saint Martins-in-the-Fields, Tra-

falgar Square, London, built by Gibbs in 1726, is one of the finest examples of this period. Its dignity, beauty of proportion, and general harmony affect one most pleasantly.

The period 1702 to 1830 in England is designated as the Georgian. Wren's powerful influence was continued and extended to America in the so-called Colonial style. The Renaissance style required too much repetition and monotony. Even so great a man as Wren could not in this style ultimately satisfy the Christian expression that had soared to such heights in the Gothic. We gaze with interest and wonder upon classic Saint Paul's, but we pray in the Gothic Westminster Abbey.

There followed efforts to revive Greek and Roman architecture. The church of the Madeleine in Paris, a direct imitation of a Corinthian temple, built 1763 to 1828, is an example of an attempted return to the classic. We quote from Pope just three lines of his satire on the imitators of Roman architecture, "Fill half the land with imitating fools"; "Load some vain church with old theatric stage"; " 'Tis a house but not a dwelling." Yet some have thought that by imitating a pagan temple they could properly house a Christian church.

The great advance in mechanical inventions, in applied science and in the use of iron and steel demanded new accomplishments of the architects. New means of transportation freed building enterprises from dependence upon local materials.

A Gothic revival followed the attempted classic with new studies of mediæval work and particularly appreciative studies of the great Gothic work in England itself. From 1819 to 1856 several books exhibiting the principles of Gothic architecture were published. Ruskin, with his love for mediæval art, and James Ferguson, the first to publish a comprehensive history of architecture, stimulated a new interest in Gothic art such as characterized the world in the "age of piety."

CHAPTER IV

OUR HERITAGE FROM THE PARISH CHURCHES AND CATHEDRALS OF ENGLAND

England is adorned with parish churches that inspire admiration and thanksgiving for their excellent testimony to the Christian faith. Their towers and spires, redolent of devotion and sacrifice, rise above every village and stand out in silent beauty across the fields. Without splendor or pretension, they are built in pleasing variety of design, solidly constructed and individually effective. They show marvelous adaptation to their surroundings and the requirements of the site. Each seems possessed of a charm and personality of its own. Monuments to a joyful Christian faith of former generations, they are living representatives of a life dominated by religion. Continually witnessing through the ages a faith in eternal realities, they impel us to build something that will outlast the temporary affairs of the community. They were not completed in six weeks and "dedicated free of debt—the most church for the least money in the county," but became living buildings. The parish churches are repositories of records in stone, wood, brass, and fabric, of acts of devotion through the years. In church building we see the greatest artistic achievement of the English race. Here art reached all the people. Every village mason could build a church so that it would be a church indeed, and the carpenter could crown it with an honest roof.

In addition to their skill, the craftsmen contributed touches of devotion, seen in the ornamentation and symbolism. They were not merely workers at so many dollars per day—cogs in an industrial system—but individuals vitally related to the work they were performing. Men,

women, and young people capable of handiwork expressed and recorded their devotion in the carving of woodwork, in the frescoes and pictures, in glass and embroideries.

The church, with its prayers and instruction through the Christian year, brought the people into touch with the Divine. Much of this ministry was associated with the various parts of the building. The porch, the door, the

An English Parish Church (Deerhurst, Gloucestershire)
Much of the building dates from Saxon times.

pavement, the pillars, the chancel, the pulpit, the windows and tower (or belfry) all spoke peculiarly of our holy faith. The "farmers stayed their plows when the bells rang for prayer."

The parish churches are significant for us because our churches are closely related to them historically. Not all of the Puritans and evangelicals left the Church of England.

In England's crudest times there were true souls nurtured in the church who, in turn, nurtured it. The parish church was the center of such noble work as that of Keble, George Herbert, Kingsley, Richard Baxter, and many others.[1] In seeking greater freedom, we gained nothing by turning our backs wholly upon our great heritage—the English parish churches of the past. Though often terribly desecrated, they withstood the vandalism rampant during many evil days. In spite of division and separation, their vitality has remained unto to-day. We may learn here God's wonderful love for his church and how difficult it is to prevail against it.

The parish churches play a more important rôle in England than anywhere else. The manner in which they were designed and constructed has much to do with their permanence.[2] The parish church always has been a vital center of the village life. It is open daily to all who wish to enter for prayer and meditation and seems to be constantly alive to the deep needs of the people. This personality of the building becomes far less potent when the building is looked upon merely as a meetinghouse, open only on Sunday.

The consecrated churches and churchyards were regarded as holy ground. When heads and arms were being chopped off for relatively minor offenses, the church property provided for wrongdoers a sanctuary under certain defined limits. In times of siege the people found refuge in the tower, and goods were stored in the building itself. Valuables were placed in the parish chest for safe keeping. A plow was kept in the tower for use on "plow Monday," when the first furrow of spring was plowed with the prayer and blessing of the church.

The influence of the church on persons who became notable is admirably illustrated in the life of John Constable, whose picture "The Vale of Dedham," painted from

[1] *Some Famous Country Parishes*, by Ezra Squier Tipple.
[2] See Sturgis and Frothingham, *History of Architecture.*

the summit of a church tower, established his real fame. The tower of Dedham appeared in several of his famous landscapes. The parish church in which Shakespeare was baptized is still in daily use. Tennyson, his father a parish

KILPECK CHURCH, ENGLAND
Note Norman door and belfry.

rector, his mother the daughter of a vicar, was greatly in love with the parish churches.

The church clock was a valuable piece of community equipment. Many old wardens' accounts of the fourteenth and fifteenth centuries mention payments to the time-keeper or for repairs to the clock. Scores of the churches have time dials dating from Norman times incised upon their walls with the proper hours for services indicated.

Every part of the parish church building is significant. The tower, rising and pointing upward, is a constant reminder of the presence of the house of God. From it the bells peal out the call to prayer and worship. In some cases the bell tower was detached but more generally the tower is a vital part of the building, taking a fitting place in the design composition. Towers are in a wide variety of design. Many Saxon churches had western towers of stone while the church itself was of timber, the tower

Porches of English Parish Churches With Chamber Above

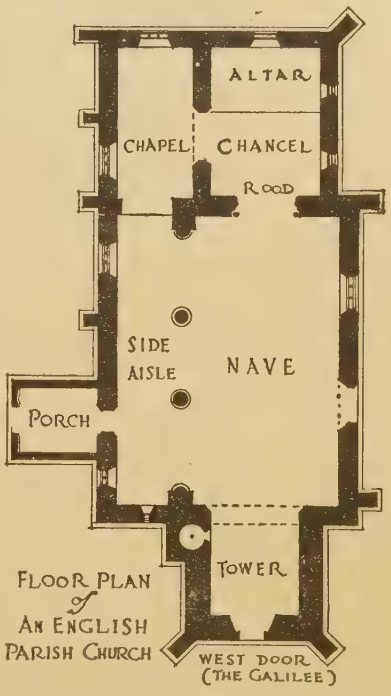
serving for defense against the Northmen. To-day we find solidly constructed Saxon towers with a building of later and more splendid construction.

The Porch

The porch was the threshold of God's house, "the beautiful gate of the Temple." Some churches had a south porch as the principal entrance, thus admitting the people at the side of the nave. A western door was provided but used only on festal days, such as Palm Sunday, when the clergy entered by this door, called the "Galilee" because it was the last stage of the procession. The church porch was for parish business and village meetings, a place for signing contracts and for other important private or public

business. Children were taught in the church porch in very early times. Penitents would assemble in the porch and petition the communicants to remember them in their prayers. Often a chamber was constructed above the porch to provide a residence for the sexton or the priest's assistant, especially for the priest who took the early morning prayer service; or the chamber was used as a study, a library, or a storeroom for records.

A lich gate, while not properly a part of the building, was given interesting architectural treatment, as, indeed, should every portion of the church's property. The churchyard wall is a frequent embellishment of the English village church and a vital part of its architecture.



FLOOR PLAN of AN ENGLISH PARISH CHURCH

The Floor Plan

In early Saxon times the typical stone-built church was a single aisled nave with a small square-headed chancel. In the Middle Ages a veil was hung before the chancel during Lent. Hooks or rings for the Lenten veil are seen even to-day in many village churches.

The church was planned to provide a place for public assembly, with a logical arrangement of the furnishings required for the ministry of worship and preaching. In some respects the plan can be traced to that of the Roman basilica. In general, it included the chancel or sanctuary, the nave or main body of the building and transepts, aisles,

chapels, and tower, with every possible arrangement and variation of these elements, but always with the nave and chancel clearly defined.

Later developments of the plan resulted in a more pretentious arrangement. Often a side aisle would be added to the original nave at a later date and probably one or more side chapels. Guilds, individuals, or the congregation would construct additions from time to time—a porch with a chamber above, or the tower might be increased in height and a peal of bells provided. The building, of course, was planned distinctively for worship but was used for classes of instruction and many affairs of the community. To-day these same churches are quite suitable for private and public worship.

Materials of Construction

The very earliest churches were of wooden or wattle construction. But in the churches as we find them to-day the best available materials were used. Usually the church was constructed of stone. In the southeast of England French stone from Caen was used. In Kent and other southeastern sections, we find walls made of flint. The roof structure (such an important part of any church) is usually of wood with exposed timbers. One may observe the honesty and faithfulness of the construction. There are no cracked and soiled plaster ceilings or applied tin-can ceilings wrought in fearful designs. The roofs are covered with wood or tile shingles or slate.

The pilgrim to the English sanctuaries finds there endless items of interest. The writer remembers entering the church at Ensham, near Oxford one bright morning. With what pleasure the sexton showed various treasures of the church, the most famous of which is one of the "Vinegar Bibles"![1] He described how certain portions of the church had been built at various periods of its history. Like many others,

[1] A few copies run off the Oxford University Press, in which the title, "Parable of the Vineyard," is misprinted ". . . Vinegar."

this church has a fine old baptismal font. Many of these fonts are undoubtedly of Norman workmanship.

In some churches we find elaborate carvings on the woodwork of the pews, rood screens, roof trusses or the reredos; carvings on the stonework, or font, color on roof and walls; interesting pavements, wonderful brasswork; in many cases the remains of glorious glass; a shallow recess that had formerly been fitted with a door, for storing banner staves; a squint window in the wall between the nave and tower so that the ringer could sound the bell at the proper moments during the service; Saxon chevron tooling on old stone work; quaint bell inscriptions; fireplaces in the tower; the stages of the growth of the fabric in evidence in the stone work; curious old alms-boxes; marvelous pulpits of stone and wood; beautiful work on doors.

Many of the fine old churches have been disfigured by later additions or "restorations" and "modern" improvements. Many things of wonder and beauty failed to survive the vandalism of those who in sorry ages thought that a thing of beauty was necessarily of the devil. Marvelous alabaster reredos work has been found buried in a churchyard, and wonderfully carved stone and woodwork was desecrated and smashed.

The Glory of the Cathedrals

The cathedral is the embodiment of the glory and triumph of the whole church. As a building the cathedral indicates the greatest heights to which the church may aspire in a material way, material yet spiritual, for a cathedral is but a material manifestation of the spirituality of the true church. Only by a visit to the cathedrals in Europe can one realize the tremendous and dazzling impression made upon the mind and soul by those magnificent structures appropriately characterized as "frozen music." One need not be very musical to appreciate how appropriate is the appellation the "Te Deum Laudamus in Stone," applied to an English cathedral.

The world never experienced such an outpouring of architectural art and devotion as during the construction of the great Gothic cathedrals between 1070 and 1225 A. D., particularly in France and England. Men's minds seemed to be dominated by a concentrated, inspired, and overwhelming purpose. Cathedrals are not only amazing in themselves but they express a marvelous spiritual energy. It was said that in the building of the cathedral God taught a new manner of seeking him and drew to himself those who were wandering away. Boys and girls shared in the work, though there were, as always, those who complained that the money ought to have been given to the poor.

The English Cathedrals

The cathedral is a record of the devotion and labor of many generations. In Winchester, we see work that was begun in 1079 by Walkelin, a Norman Bishop, and continued in succeeding stages until the sixteenth century and even later. The pilgrim by studying this wonderful building can see recorded various stages of English history. At Exeter one may see in the foundations remnants of Saxon construction! Every ancient building has a life history of its own. Many of the European cathedrals are overwhelmingly impressive by their very size. One can never forget the impression as he enters the soaring nave of a beautiful cathedral and looks down the marvelous vista through the choir and chapels. Winchester is 555 feet long. (How inappropriate to speak of ordinary parish churches as of "cathedral proportions"!) From every viewpoint the glorious spire of Salisbury makes an indelible impression. Pepys wrote in his famous diary "so all over the plain by the sight of the steeple and at night-fall to Salisbury."

The Cathedral Program

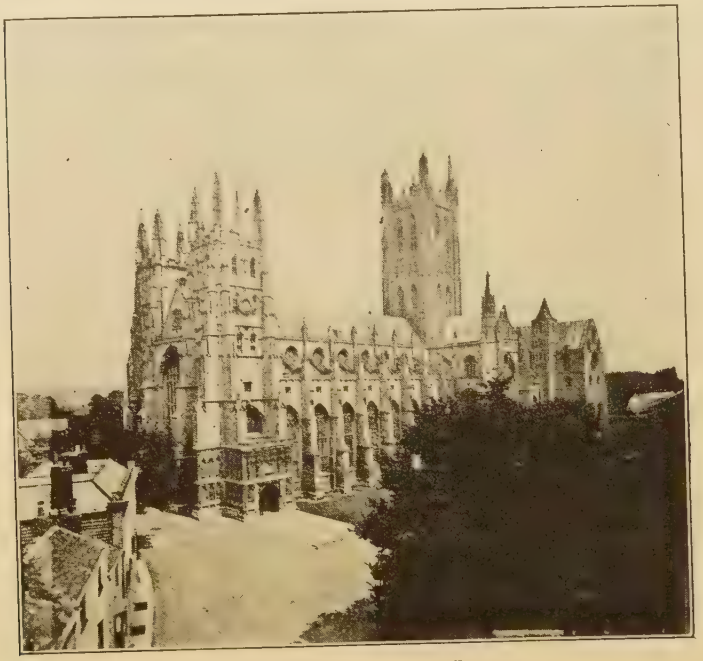
The cathedral building came into existence to meet the needs of a definite program. The cathedral is the bishop's

church situated at the head of the diocese. Here were located a group of ministers, each with a specific duty. The library, museum and school of music were important parts of the cathedral program. The cathedral was the great rallying center and vitalizing point for the entire diocese. The Church of England has now under way plans for making the cathedral of more vital service to the diocese. It has been proposed to have as clergymen on the cathedral staff men who are especially proficient in certain departments of church work. Some of the staff will also be in charge of parish churches. Pilgrimages of school children and others are being arranged and the young people are being instructed in the historical and religious glories of the great church.

The people of the diocese or city found in the cathedral the best means of making a noble expression of their faith and of their cultural life. All the arts and crafts were called into service for the construction and furnishing of the building. They wrought in stone, glass, wood, metals, and textiles. The English cathedrals and many of the churches require sizable books to tell their histories and to describe the points of wonder and interest in each. We can take space for only a few notes about the cathedral at York in the hope that the reader will be stimulated to explore further the fascinating history of the Christian Church, not only as indicated by the accounts of the theological arguments but as revealed in the devotion and religious energies of the people who undertook to follow the Christ and save their souls. The series of fabrics in England hold in carven stone and glass a history that the church of to-day cannot well ignore.

At York Cathedral in England thirteen hundred years of Christian fellowship have recently been celebrated (1927). In dignity and massive grandeur, with its noble towers and great clerestory windows, it is hardly excelled by any other English cathedral. The first church of split oak logs and thatched roof was erected in 627 on the spot

where the newly converted king of Northumberland, Eadwine, was baptized. The well where he was baptized may still be seen. A larger church of stone was built in 642 and destroyed by fire in 741; a "magnificent basilica was built by Bishop Albert and finished in 767. The superintendent of construction later became archbishop. This structure



Canterbury Cathedral, England

was accidentally burned by Norman soldiers during an uprising against William the Conqueror. In the thirteenth century work on the choir and chancel on the present scale was begun. The great cathedral was completed and reconsecrated in 1472. It is remarkable for much famous glass which escaped the vandalism of the civil war. Its east window, 33x78 feet in size, is the largest in England that retains its original glazing. The glass reveals a develop-

ment in this art during four centuries. A maniac set fire to the choir in 1829, doing damage to the extent of $325,000. Later a plumber set fire to the nave roof. Overcoming all discouragements and obstacles, those who loved this house of God have continuously rebuilt and beautified it, and thus have spread its influence throughout the civilized world.

During the gold rush in Australia a wandering fiddler played for three miners "O come, all ye faithful." Upon their remarking that they used to hear this in Yorkminster, the fiddler testified that he used to sing in its choir. The miners then gave him gold-dust sufficient to make him rich for life. They all stood and agreed, "Yes, sir, there is no minster like ours in all the world."

Has the Cathedral Program a Place in American Life?

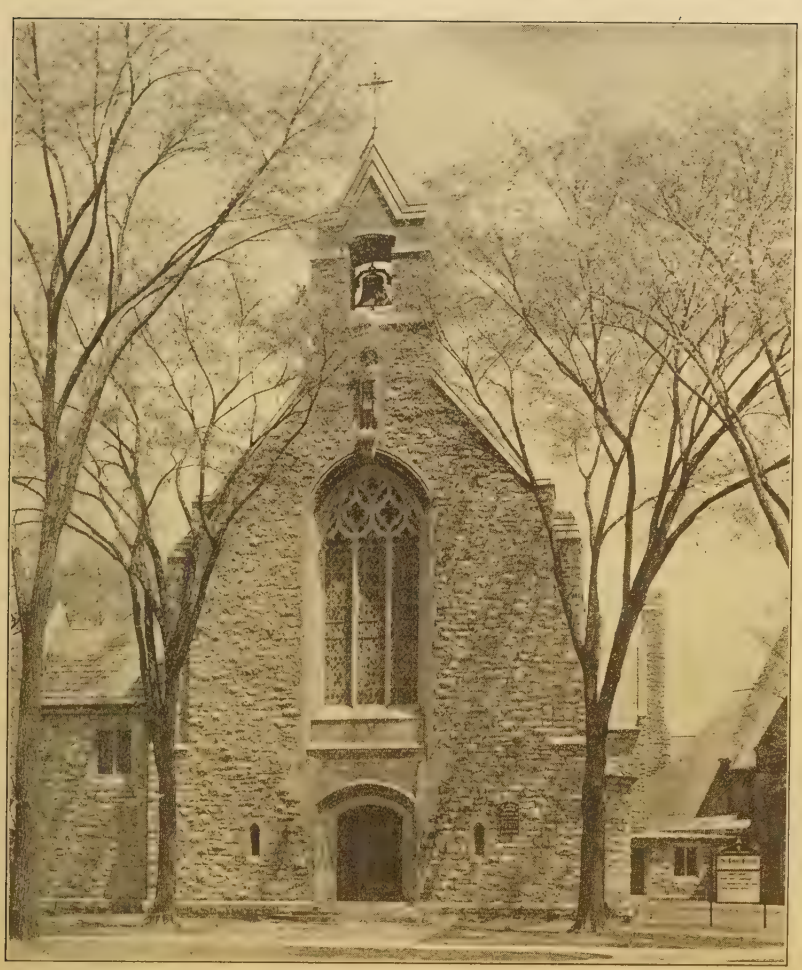
Knowing the power of the cathedral in Christian civilization, we are led to ask, May there not be a place for it in American Protestant life? As a center of unity in which representatives of well-established churches would cooperate; as a great school of religion, religious art and music for the clergy and laity; as an expression of the finest religious culture and devotion in a city; as a stimulus to better architecture; and as a center for great services of united worship and forceful preaching, the cathedral might be made a great asset in a modern city. Churches near the cathedral site might devote their property equities to the cathedral enterprise and receive in return titles to chapels in the cathedral group.

CHAPTER V

BUILDING THE HOUSE OF GOD IN AMERICA

Captain John Smith described the first church in the colony of Virginia as "A homely thing like a barne covered with rafts, sedge, and earth." "Yet," he wrote, "we had daily common prayer morning and evening, and every Sunday two sermons, and every three months holy communion." Throughout the colonies in the early days churches were generally mere meetinghouses. As the colonies became prosperous, more pretentious meetinghouses and churches were constructed. In the South the churches frequently conformed to English traditions. Saint Luke's, Smithfield, Virginia, might easily be taken for an English parish church. In the middle colonies the meetinghouses of the Quakers, the churches of the German sects and of the Church of England and the Colonial or Georgian meetinghouses gave a greater variety of architecture. In New England the meetinghouse type generally prevailed. One must confess an admiration for these white meetinghouses with their spires rising among the green hills and an appreciation of their vast influence. But they were *meetinghouses* and mark a distinct break from the churchly order.

During the eighteenth century the influence of Sir Christopher Wren and the Renaissance architecture was strong, giving us the so-called Georgian or colonial style. Christ Church in Alexandria, Virginia, was designed by Joseph Wren, said to have been a descendant of the great Wren. An interesting feature of this church is the Palladian window. The old Polwick Church, near Mount Vernon, an example of the early American rural parish church, was built in 1769 with the active aid of George Washington.



Saint John's Church, Buffalo, New York
(Protestant Episcopal)

Some of the smaller churches have great interest, such as Gloria Dei, Philadelphia (1700), and Saint David's, Radnor (1714). Christ Church, Philadelphia, is thought by many to stand for the best in American Georgian church architecture. It was constructed in 1727 from plans prepared by Doctor Kearsley, a physician, at a time when an appreciation of architecture was considered an element of culture essential to every gentleman. The building shows some influence of Saint Martins-in-the-Fields, London. A great Palladian window lights the chancel. The massive tower is surmounted by a graceful spire. Saint Peter's, Philadelphia, built in 1761, is another interesting example so far saved from the hands of "improvers." Saint Michael's, Charleston, South Carolina (1742), is believed to have been built from plans by James Gibbs, the noted follower of Wren.

Undoubtedly, the Quaker meetinghouses had an influence in making early American architecture substantial and plain. Several old Moravian and Reformed churches have considerable interest. Many excellent examples of early American work are found in rural sections. In Springfield, New Jersey, the original church, built in 1761, was used as a storehouse by the colonial government while a barn was used for a church. A battle was fought around the building in 1780. The present building was built in 1791, the nails and shingles plainly showing that they were made by hand. In the town of Swedesboro, New Jersey, the Episcopal church, built in 1784, is an excellent example of Georgian architecture, with a Palladian east window. Two miles south is an old Moravian building and two miles north a stone meetinghouse built by the Methodists under the direction of Francis Asbury, their first bishop. The old ship meetinghouse in Hingham, Massachusetts, was framed by ship carpenters in 1680.

It is not possible to list the notable colonial and early American churches. They are worthy of more extensive study than has thus far been given them. They evidence

the ideals and habits of the people. While we think of them as being mainly of the Georgian order, they had an interesting diversity of style but with a strong classic influence throughout.

KENNEBUNK, MAINE

In the French colonies in Canada some very creditable building was done. The rigorous climate demanded substantial building, and the abundance of limestone made this possible. Quebec seems to be full of churches, some of which are, for America, of great age. They are of solid

construction with considerable effort toward architectural style. The Romanesque style, reminding us of Norman influence, prevails. The Basilica at Quebec dates from 1633. It has two towers of different design and a classic entablature. The design represents strength and utility, but seems quite distant from the free and inspiring lines of the Gothic.

We must recognize the contribution of the Spanish countries and their architecture in the Southwest. Unfortunately, this style has been parodied in cumbersome fire houses, town halls, and gasoline stations, but as an expression in Christian architecture it is interesting, colorful, redolent of devotion, and fitting to its environment. It gives to the United States a touch of romance and color from a beauty-loving race from the south of Europe. The Spanish priests came always with the Spanish soldier and while the influence of the soldier has disappeared from our continent, the influence of the church, particularly as expressed in its architecture, retains its potency. We will not undertake to name the many monuments still extant. In Juarez, Mexico, there is an interesting example. The ceiling is composed of carved logs said to have been carried on the shoulders of Indians for two hundred miles. One Philadelphia architect spent six years studying them in the Southwest, and his book will be found interesting.[1]

Later American Church Building

Church building in America has labored under tremendous handicaps. The great distance from good examples of Christian architecture, the lack of trained craftsmen, the conditions of frontier life, lack of church unity, an apathy toward good usage and the appointments for public worship, strong emphasis upon meetings and controversial preaching rather than worship, made the orderly development of

[1] *The Old Mission Churches and Historical Houses of California*, by Newcomb. Also *In and Out of the Old Missions*, by G. W. James.

a constant and inspiring church architecture most difficult. As a permanent contribution the Georgian architecture has serious limitations. Its influence, however, will continue, for many feel that it is a distinctly American style, although it is really an importation.

Following the Revolution, our architecture took on a more monumental character. Brick and stone came into more general use, but due to the influence of the classic, a pseudo Greek style became prominent. The Gothic revival in England had some influence upon our building. To this movement we credit the fine old Trinity Church in New York City, built in 1843 by R. Upjohn, and Grace Church, New York City, built in 1858 by Renwick. Trinity Church, Pittsburgh, built 1870, shows good Gothic influence. It has transepts, an apsidal choir, and a fine carved stone pulpit. From 1850 to 1876 the Civil War and subsequent expansion brought on a period of political agitation and of commercial prosperity but of stagnation and ugliness in art. Large and costly buildings of inferior and unintelligent design attest a period of darkness and materialism in American architecture.

The great fires in Chicago (1871) and Boston (1872) and the panic of 1873 seemed to give some check to the abnormal commercial activity. The Centennial Exposition in Philadelphia, in 1876, brought the American people into contact with products of Old World art. More extensive foreign travel followed and an interest in finer things developed. Little was done in this country, however, in architectural education. Architects who desired training usually went to France. Classic influences dominated modern French architecture. H. H. Richardson, a man of remarkable talents and dominating personality, developed a style which, in his own hands, was significant. Trinity Church, Boston, the Pittsburgh County Buildings, and a number of libraries are fine examples of his work. But following his death in 1886, there arose many imitators who lacked his spirit and endowments. They oversupplied

the country with squatty pillars and overbearing arches and gave us a weary variety of ugly, heavy, and utterly unstimulating architecture.

Then came a period of tremendous industrial development, requiring the architectural profession to use practically all its resources in meeting the demands for new commercial and industrial buildings, and French chateaus and castles for the new millionaires. For a time the preoccupation of architects with civic and commercial work, the ignoring of the church by the colleges of architecture, the lack of interest in worship by the church, the mail-order architect and general lack of cultural appreciation threatened to bring our church architecture into a deplorable state.

We are hoping that the dark ages in American religious architecture have passed, but we cannot be too sanguine. The corner pulpit, theatrically bowled floor, curved pews, movable partitions, and pseudo Gothic are still with us.

In general architecture we discover many evidences of failure to recognize fundamental principles of design. Here is a great commercial building with a long row of Corinthian pillars stretching across the entire façade. Now, a pillar naturally rests on something. The eye follows down to see the foundation of these pillars and lo! they rest upon a solid expanse of plate glass! One marvels at such defiance of good taste and such an exhibition of ignorant designing. In one large city such atrocities are seen repeatedly. One great building fourteen or sixteen stories high has a phalanx of classic pillars around the upper stories, each pair of pillars apparently astride a narrow strip of wall. These buildings, unless a friendly earthquake occurs, will stand for years to testify to the crass unintelligence and the materialism of the times.

Within the past few years, however, several very creditable church buildings have been constructed. Messrs. Cram, Goodhue and Ferguson have to their credit several excellent buildings constructed by them as architects and

others for which they were individually or as a firm, the consultants. Of these we mention only Saint Thomas' Protestant Episcopal Church, in New York City; Saint Bartholomew's, New York City, a fine example of modern Romanesque; Calvary Protestant Episcopal Church, Pittsburgh; First Baptist Church, Pittsburgh; the Congregational Church in Montclair, New Jersey; the Fourth Presbyterian Church in Chicago. Saint Paul's Lutheran Church, Washington, D. C., and other excellent work by Frohman, Robb and Little; the Chapel of the Mediator in Philadelphia; the Ardmore, Pennsylvania, Presbyterian Church; the Casper, Wyoming, Protestant Episcopal group, by Thomas, Martin and Kirkpatrick; the Church of the Saviour (Methodist Episcopal), in Cleveland, Ohio, by Corbusier and Foster; Trinity Methodist Episcopal Church, Springfield, Massachusetts, by Allen and Collens, and many other creditable buildings, give us great encouragement for the future of American architecture. Montclair, New Jersey, Presbyterian, by Carere and Hastings, and Union Congregational, Bridgeport, Connecticut, by Allen and Collens, are excellent examples of modern adaptations of the Georgian style. These achievements are the more creditable when we realize that modern architectural schools have done practically nothing to encourage a sympathetic conception of Christian architecture. Those concerned with training younger architects seem to have little sympathy with the Gothic spirit and motive. High honor is due those architects who with fine discernment and feeling have sensed the requirements of a spiritual expression in architecture. They have laid the church of the future under an obligation of gratitude.

Wesley Methodist Episcopal Church
Worcester, Massachusetts

CHAPTER VI

THE PROBLEM OF MODERN CHURCH BUILDING

We now face the problem of leadership in church building of a type worthy of the present generation, which commands resources undreamed of in the thirteenth century. Can we equal those builders of the past in abandon and devotion to a great cause? Some American churches frankly broke with the churchly order of the past and set up in this country as independent denominations but failed to give to the people the full ministry properly expected of a church. Too often men have come to look upon the house of God as just another civic structure that might in design and expression be little different from the town hall, theater, library, schoolhouse, or bank. Wise leadership in a church-building enterprise must insist that just as there are fundamental truths in our holy faith, so there are certain factors essential of maintenance in Christian architecture; otherwise it is as incongruous for its purposes as the Koran in a Christian pulpit. While local conditions and the materials of construction widely differ, there are motives and features that should mark the house of God regardless of its location. There is a language of architecture in which either truth or falsehood will be expressed.

Some Essential Elements that Must Obtain in a Worthy Church Architecture

Church architecture should express religious truth. The language of architecture may not consciously be understood but its influence is potent. When this influence is negative, there is a real loss to the community. Particularly should the church be careful of her architecture—it speaks

directly to the feelings. It is the duty of the church builder to understand this language, absorb its vocabulary, and through it proclaim such a message as cannot otherwise be expressed. We are coming more generally to realize the influence of buildings. Walpole's book, *The Cathedral,* describes how a cathedral held out to the minds of the people such an overpowering domination that they began to fear it. The churches of a denomination that invests millions of dollars in church buildings ought to realize what a power for good, evil, or indifference such an expenditure may become. The inappropriateness of pagan forms

Roxborough Presbyterian Church, Philadelphia, Pennsylvania

of architecture in connection with the Christian Church should be quite evident. Quite likely all people are strongly influenced by their architectural environment even if they are not able to analyze its effect. Doubtless the architecture with which the almost illiterate Roman Catholics in isolated parts of the world are familiar has had a most effective influence upon their lives, and we may venture the assumption that conditions of irreverence of which some folks anxiously complain have been induced by the conglomerate or sterile architecture that has prevailed in

our churches. To-day there is a tendency to give tone and meaning to the structures used for the activities of commerce and industry. The community is beginning to question the right of an industry sordidly to devastate the possible beauty of a locality by the erection of ugly buildings. How much more should be expected of a church!

The church building should express aspiration. In the

CHURCH OF THE SAVIOUR, CLEVELAND, OHIO
(Methodist Episcopal)

upward trend of all the parts of the building is seen the influence of a faith that finds its climax in the heavenlies. Crude and stubby towers ended abruptly before reaching the height of the roof ridge, fail to lead one's mind far upward. A fine small fleche or an English bellcote will cost less than such "towers" and will point one upward as far as his soul has desire or capacity to climb. The

square library type of building does not aspire at all. It may be a repository or safe storage place for books, relics, or works of art, but does not attempt to point upward. The architecture that came out of pagan thought and worship cannot express the Christian hope. It is unforgivable to cramp a Christian institution into a purely materialistic expression.

Church architecture should express a spiritual faith. It should witness a faith that sustains the people during an earthly existence. It must express more than cold utility. Some plans would indicate that the people who propose to use the church have not an idea in the world disassociated from their commercial pursuits. A church building enterprise is a venture of faith. It should speak of the faith and sacrifice that make the house of worship and Christian service possible.

It should inspire worship. A Christian church building should promote worship. The architect should be clearly informed as to the program of public and private worship, so that proper facilities may be provided for these services. Especially should the interior of a church stimulate a devout frame of mind. A sanctuary fashioned after a concert hall cannot produce the warmth of heart that will lead to the thought, "This is none other than the house of God." Windows that do not glare, decorations that are refined in tone, uplifting lines of structure with something that reminds of God go far toward producing the realization of God's presence. Nothing should intrude between the prayerful state of the soul and the thought of God.

The church building should express endurance. We must construct our buildings honestly and enduringly. This may cost more, but much of the added cost will be compensated for by eliminating waste space and crudities. We must take a longer time to build and build in such a manner that the church erected to-day will be in use a hundred years from now. In the midst of a hurrying world the church should stand as representing the realities of eternity.

Church architecture should provide for the nurture of Christian character. The principles upon which programs of religious education are based are now well established and promulgated. The rooms in which Christian character is to be nurtured should have an atmosphere that will identify them directly with the church and at the same time be efficient from an educational viewpoint.

Church architecture should provide for fellowship. The early Christians ate their evening meal together in the homes of the members. Many churches by failing to provide for Christian fellowship have driven the people away to find reasonable social fellowship in places other than the Father's house.

Our problem now seems to be to design a building that will be distinctly religious in expression, efficient for service, and yet not cramped into formal and lifeless styles of architecture. In one composition we must construct a sanctuary, a school building and recreation and fellowship halls, all so related that the result is a harmonious expression, with every facility for the efficient, unified supervision of a varied program.

Modern church building calls for a leadership definitely and intelligently devoted to this noble endeavor. Aside from its practical considerations, Christian architecture may be the very highest expression in the realm of art. How much, then, depends upon those who are called to this work! To build the house of God and make it a place where people can realize the Divine Presence, where little children will be instructed in the Way, the Truth, and the Life, and where Christian fellowship and service will evidence the presence of the Divine Spirit in human living, is a work of art in the supreme sense. A work of great art can hardly be created without heartbreak. We may not hope to achieve as we should in this high calling until as churchmen we realize the Broken Heart at the center of the Christian faith and become anxious to manifest this in such sacrificial expressions as an adequate church building program may entail.

CHAPTER VII

LEADERSHIP IN CHURCH BUILDING

A SUCCESSFUL building enterprise requires competent leadership—leadership in which vision is followed by courage and perseverance in overcoming difficulties and discouragements. In former times certain ministers of every rank considered leadership in church building worthy the devotion of a lifetime. More lately church leaders have occasionally recognized certain ministers as "church builders," though sometimes the "builder" has been just a handy man whose building too frequently seemed to be in disregard of the purposes of a church.

The need for churchmen who will lead church building enterprises is clearly evident to-day, because of the importance and the magnitude of this branch of religious work. One Protestant denomination spent more than $40,000,000 in 1926 for new buildings and equipment. It may be questioned whether we have leadership adequate for the best possible use of such vast treasure, devoted to the building of the house of God. Many creditable plans and designs have resulted from the persistent efforts of men and women who have had a devout understanding of what a church building should be. But usually the pastor is the one who must make the enterprise "this one thing I do" until the building is constructed and financed. The pastor is the one who presumably gives his entire time to the work of the church, while the lay members of the building committee must of necessity be mainly occupied with their business. The pastor is a specialist in religion. The building of the house of God is a religious act of high importance. No detail connected with this work of faith is unworthy of his careful attention. He

need not be an expert in all the various phases of the building program, but he should know when all the items are properly cared for. He cannot afford to be ignorant of any part of such program—financial, architectural, structural—each should come within the range of his intimate knowledge. Pastors who have led successful building projects are agreed on this point.

Every pastor is likely to be called upon to lead a building enterprise, as a large proportion of our church buildings are inadequate for the seven-day-a-week activities of the modern church, and most of them must be rebuilt or replaced. The younger ministers, the associate pastors, and directors of religious education are quite frequently called upon to lead a church building enterprise.

We may roughly list the duties of the responsible leader under the following heads: survey, promotion, organization, finance, plans and construction, and leadership training.

Leading the Survey and Study of the Field

That the church may plan to meet its responsibility, a thorough study should be made of all the local conditions that may affect the program. The denominational Board of Home Missions or religious educational leaders can recommend several excellent books and helps for use in making a community survey and developing the program to meet the needs revealed. At least the following items should be covered in the study of the field: (1) a religious census of the territory the church should reach; (2) a social survey of all the conditions influencing the character of the people—of every condition that may contribute ill or good to the work of advancing the kingdom of God; (3) a study of the population trends and delimitation of the field to be served; (4) a study of the various population groups and every age group with a view to determining phases of the church program required; (5) a survey of present and probable future economic resources; (6) a study of the educational and social institutions of the other

churches in the community with a view to determining what should be done to co-operate with them or to supplement their activities.

After thoroughly studying the field and appraising the church's responsibility in ministering to the needs of the community, a program of church ministry may then be planned.

Promotional and Educational

The building program must be founded on and sustained by a thoroughly developed educational groundwork and a carefully planned spiritual mission. The new church building enterprise should be considered as a religious venture. Many of the constituents will need instruction regarding the ministries required of a modern church if it is to fulfill its obligation to humanity in the community in which it is placed. The organization that assumes to fulfill the purposes of a church, in honesty to the general church it represents and to the community it proposes to serve, must render to the best of its ability every office that will contribute to the more abundant life of the individual and community. To this end a portrayal of the ministry of Jesus Christ should help. He preached, taught, healed, comforted, fed the hungry, and befriended the children. A recital of the broad ministry of great churchmen should stimulate the people to build for the largest possible service. John Wesley, the founder of Methodism, operated a medical clinic and a library in his London church, gave employment to handicapped people, and rendered other services. Spurgeon interested himself in a variety of activities to better the conditions of human living.

A knowledge of the conditions in the community affecting character development should help the church to realize its responsibility in this regard. A study and explanation of the work of other active churches should be a valuable stimulation. Increasing the program and attendance at such activities as are possible in the old

building will help demonstrate the need of better equipment.

A stereopticon may be used to interest the people in the glorious history of church building in Europe and to illustrate modern buildings, church-school department rooms, and other features of a seven-day-a-week church. It may also be used effectively to help the people visualize their own new building. Special addresses should be delivered to church-school departments and all the other church organizations.

Sources of material for the educational program. The Methodist Episcopal Church has a special stereopticon lecture entitled "Building the House of God," copies of which are deposited in several cities for lending to local churches. The example of Nehemiah should provide an effective stimulus. He had a concern and vision, made a survey of the conditions (Neh. 2. 12–15), organized the forces and resources and brought the people to a mind to build. Other texts of Scripture stressing an obligation to build are 1 Chron. 22. 6; 2 Sam. 7. 2; Hag. 1. 2–6; Isa. 54. 2; 1 Kings 9. 3. Themes that have been used are: "The House of God an Essential Center of Kingdom Ministry," "Physical Equipment Essential to Spiritual Ministry," "Our Workshop—Its Chief Output and Its By-Products," "The Church Building as an Expression of Christian Ideals," "The Church Building and Its Reaction on the Life of the Church," "The History and Meaning of some Christian Symbols," "The Use and Significance of the Various Furnishings of the Sanctuary," "The Church Typical of the Homeland of the Soul."

In developing sermons and addresses the following subjects may be suggestive for paragraph or sermon headings: "The Economic Influence of Religion," "The Church a Safeguard to Community Life and Prosperity," "The Church Building the Embodiment of Religious Principles," "Comparison of Public School Facilities and the Equipment Provided for Religious Education," "The Sacrifice of non-Christians for Their Temples," "The Church-

Lighthouse, Life-Saving Station, Home of the Church Family, and Center of Worship, Education and Service," "A Strong Local Church Essential to World Evangelism," "The Rendezvous of the Divine Presence," "The Soul's Need of Worship," "Art, the Ally of Religion," "Art in the Promotion and Expression of Religion," "The Church Building and Its Reaction Upon the Life of the Individual and the Community," "A Comparison of the Objective of the Crusader and the Object of a Church Building Program," "The Taj Mahal and a House of God."

One must not be discouraged if it takes many months or even years to lead the people to the place from which they will venture forth and make the sacrifices necessary to build commensurate to the need. Some building enterprises have been precipitated without adequate preparation of the minds and hearts of the people. This unwise method is usually accompanied with careless planning of the building itself and consequent bad debts and discouragement.

Some folks will recite these unsuccessful enterprises with discouraging results. The leader can counter this with descriptions of other congregations similarly situated that have successfully accomplished tasks just as difficult. Here again he must rely on a strong religious motive. Having made sure in his own heart that the work is right and having led others to the same disposition, the neutralizing influences can successfully be overcome. In a religious enterprise such as building the house of God, there should be no division in the church, and no thought that the pastor must seek another field of labor after the building has been erected. The whole church should move forward unitedly, continually winning to its support new friends and to an increasing degree the confidence of the entire community. This has been the happy situation of many recent building enterprises.

The Building Organization

Each church should develop such a general building committee or building council as will best meet the local requirements. The following suggested program must, of course be well tempered or be developed by ADAPTATION to the local circumstances.

Suggested Building Organization and Activities

The General Building Committee. Sixteen members representing all the interests and departments of the church plus the pastor as member ex officio. This committee to choose its general chairman and then be divided into sub-committees of four members each, with the responsibilities of each sub-committee clearly defined. Care should be taken to have the women's interests, young people and Church-school adequately represented in the membership of the committees.

1. *Program or Findings Committee.* Canvass the community to be served, study aims and activities for the modern church. Prepare survey of the requirements for the various groups and activities. Counsel with denominational religious educational and home-mission leadership. Secure from denominational Bureau or Department of Architecture sketch plans indicating how similar problems have been solved. Present outline of proposed work to general committee and congregation.

2. *Construction Committee.* Investigate architects for General Committee. Provide one person to make all contacts with the architect. Recommend employment of consulting service and architect. Counsel with Program Committee to see that all requirements are provided. Secure approval of preliminary plans. Counsel with Finance Committee as to amount required and possible. Secure proper authorization for all needed contacts with architect and builders. Recommend letting of contracts. Inspect construction of the building. Secure bids for equipment.

3. *Finance and Subscription Committee.* Study successful methods and secure adoption of a financial program. Study and appraise financial resources. Prepare forms, arrange methods of accounting, enlist and train canvassers, conduct subscription campaign, finance project during construction and collection.

4. *Committee on Promotion and Publicity.* Keep closely informed concerning progress of committees. Give earnest publicity to the requirements; the possibilities represented by the plans, the accomplishments of other churches, progress of the campaign, progress of construction and the plans for dedication.

Prepare prospectus, placards, etc., for the subscription campaign. Assist in training canvassers, keep unpaid subscriptions alive.

Leading the Financial Program

A great deal of care should be expended in building the financial program. The following paragraphs are offered as suggestions. Every wise leader understands that all suggestive programs must be adapted to local needs, but some program must be developed and adopted.

The pastor will usually be depended upon to aid in the financial program. He is often able to point out resources that are overlooked by the local committee. The standing of the pastor often affects the financial standing of the church. The excellent literature on stewardship should be studied by the whole church. A valuable by-product of the building enterprise may be a distinct advance in the grace of stewardship.[1] During the development of a building enterprise in Minnesota one half of the membership became tithers. The employment of expert financial leadership should be carefully considered. In many cases such leaders have accomplished excellent results. Care should be taken, of course, to provide definitely religious foundations for the financial program. Some financial

[1] See *Stewardship for All of Life*, by Luther E. Lovejoy.

leaders have greatly helped churches by introducing evangelistic motives for financial affairs. An illustrated prospectus describing the proposed new building, the facilities to be provided, and its possible services to the community is essential. When churches are active and constitute valuable community assets, the financial institutions are more favorable toward granting loans. In many cases where an unfortunate debt has accumulated, it is found that the building has been unwisely planned. People should be urged to subscribe only what they fully intend to pay; the pledges may be made in the form of interest-bearing notes, each subscription carrying its own interest. Many of them will be available as collateral for borrowing at the bank.

The terms of the subscription should be stated in months or weeks. There is a growing opinion among financial workers in favor of the short-term subscription. It is better to have a smaller amount subscribed on a twenty-five months' subscription than a larger amount for a longer term. Thirty or thirty-six months is considered by many the maximum wise length for the subscription period. During the construction of the building many new friends will be found and interest in the enterprise will increase as the people realize what the new building will mean to the congregation and community. If a short term subscription campaign is successfully conducted, a new campaign can be put on at the end of the first period, or at the time of dedication.

The confidence of the constituency must be cultivated. Agree as to the maximum amount that will have to be carried as an unprovided debt and the maximum amount of debt that will be incurred before the subscriptions are paid in full. Keep the expenditures within these amounts or secure a new authorization from the congregation.

Carefully select the canvassers, using the most capable and often the busiest persons. The canvassers should be thoroughly trained and very carefully assigned. No can-

vasser should interview any except those to whom he is assigned. A period of at least four weeks should be given to the training of the canvassers and to preparing the constituency for the subscription campaign. During the campaign there should be daily meetings of the canvassers with reports and probable reassignments. Definitely limit the time for making the canvass. Many other definite suggestions for building the financial program will be found in books dealing with church programs and finance.

Leadership During the Planning and Construction of the Building.

The pastor or the responsible leader of the building program should necessarily be watchful during the development of the plans and the construction of the building, being careful that those who are best fitted to take up the various items are neither unduly interfered with nor allowed to neglect their responsibilities. The leader may need to insist on the employment of the best possible architectural service and the employment of competent consulting service. He may find it necessary to re-enforce the recommendations of the architect or consultants looking toward the use of better materials or the adoption of more adequate plans. He must not assume financial or other responsibilities that are properly delegated to the local church board or committees. He should use consecrated diplomacy in harmonizing the various demands for space in the new building. Many classes and organizations will clamor for a room, whereas several of the rooms may have to be put to multiple uses.

Training Leadership for the Enlarged Program

Long before the new building is completed the task of training departmental superintendents, additional church-school teachers and leaders in the various activities must be well under way. Some church building enterprises have been accounted failures from the standpoint of increasing

the work of the church, whereas the failure lay not in the building enterprise itself but in neglecting to prepare the local church leadership to take up new and varied tasks. This training should include a study of the Christian's financial obligations and a study of church financial methods.

CHAPTER VIII

SELECTING ARCHITECTURAL SERVICE

The decision as to architectural service largely determines the character of the entire building program.

Architecture is one of the learned professions. The competent architect must have technical skill and knowledge, business and executive ability, with the addition of artistic feeling and a background of general scholarship. The trained architect has had courses in liberal arts, literature, and history as well as technical training in business administration, design, architecture, and engineering.

In most States the law governing the practice of architecture is very explicit. Some require registration after having passed a State examination, otherwise it is illegal to use the term "architect."

The "plan drawer" in certain States that have lax laws requiring the registration of architects may be merely a draftsman or builder who can represent in a bare way the elements of construction, leaving the important details to be filled in as may suit the whim of anyone into whose hands the "plans" may fall. This is a condition productive of misunderstandings and requiring costly adjustments during the building enterprise.

In some States the law requires that an architect independent of the contractor prepare the plans and supervise the construction.

The American Institute of Architects, with headquarters in Washington, D. C., is the national professional organization for architects. To become a member one must be a legally qualified architect and must meet certain defined standards. The Institute has done much to promote better architectural practice.

Architectural service is needed for the smallest church-building project. A competent architect will save more than the amount of his fee by his knowledge of materials and possible economies. The builder cannot take the place of the architect any more than the druggist can do the work of the physician. The architect is a referee. During the planning and construction of the building questions arise constantly regarding the materials being used, the composition of mixtures and many other items. The architect is the one to whom all such questions are referred. He is responsible for seeing that the builder meets every requirement implied in the blue prints and specifications. Obviously, if the plans are drawn by the contractor or by an architect in the employ of the builder, the owner is left with no advocate. In some cases where churches thought to practice economy by having the builder draw the plans, such as they were, it has been necessary later to employ additional architectural service in order to secure precise fulfillment of the contract. This, of course, is contrary to the principles of good architectural or building practice.

Employing the Architect

Do not expect the best architects to come soliciting your commission. The very architect you need may never solicit. He may take the same attitude that the doctor or lawyer does regarding the solicitation of work. The building committee of a church that spent more than $300,000 for their new building, agreed by formal action to select their architect from a list of six outstanding firms. They wrote these firms inquiring as to terms, etc., and received courteous replies. But since none of these very competent firms sent a salesman to solicit the commission, they employed another firm that did send a solicitor with a contract form ready to be signed. Later they had cause to regret that they had not employed one of the six outstanding firms. All personal considerations must be disregarded and the architects selected with consideration only for the

interests of the church. Members of building committees who would insist on the best medical or legal service available, will sometimes employ an architect with slight regard to all that is involved. One church selected a fine site on which a building costing $200,000 was to be erected. They employed as their architect a popular young man who had never built a church nor had ever been employed by an architect who had. They not only intrusted $200,000 of the church's money to this untrained man but intrusted to him also the task of expressing in architecture their religious motives and of providing the facilities where they should worship God and where their children's children should receive their religious impressions. The result was as might have been expected.

Do not employ an architect on the basis of the pictures he may present. Anyone can hire an artist to draw sketches that will be pleasing to the committee. Employ the architect just as you would other expert service— upon his ability and record of accomplishment, his general scholarship and sincere interest in the work of the church. The worst possible way to select an architect is to invite several to present suggestive sketches. In such an arrangement the best salesman with the prettiest pictures and rashest claims as to the economical cost of his buildings may win the commission. Some of the cleverest salesmen may prove to be the poorest architects. An architect who is wholly inadequate for the problem may quite easily satisfy the committee or some of its influential members. This method is just as unwise as it would be to invite a lawyer or a physician to offer without charge sample briefs or prescriptions. The competent and conscientious physician will not give the medicine that the patient thinks he needs but will thoroughly diagnose the case and give, what to his mind is the necessary remedy. Competent and conscientious architects are well within the range of reasonable methods when they decline to offer free floor plans and designs or to co-operate in executing a building plan which

they think would be wrong for the problem under consideration.

There is an approved method of competitive selection. When it is desired to select an architect in this way the committee should write to the American Institute of Architects, Octagon Building, Washington, D. C., for a copy of the approved program for architectural competitions. Briefly stated this method is:

1. Secure a competent adviser or jury of unbiased architects.

2. Select a list of competent architects whom the committee desire to invite to enter the competition.

3. With the aid of the adviser or jury or denominational bureau or department, prepare a program of requirements which is to be handed with a map of the site and a statement of all limitations and conditions to each architect. Each architect invited to compete should be compensated in some amount to help cover the cost of preparing his drawings and to encourage him to make a thorough study of the problem.

4. The jury then indicates to the Building Committee who in their opinion, has offered the best solution.

The Architect's Compensation

An architect should be paid an honest fee. Out of it he must pay his draftsmen, the majority of whom are college and university trained, his office force, office rent, supplies, drafting materials and blueprinting of plans after they have been drawn on paper or linen, and many other items of expense. The minimum fee a church should expect to pay for competent architectural service is six per cent of the cost of the building, including heating and lighting equipment, chancel furnishings, pews, etc. A larger fee will be required when chancel furnishings are detailed by the architect in order to have them harmonize with the architecture of the building. In many cases, and especially for remodeling old buildings, seven per cent or more

should be paid. A comparison of this fee with the cost of other expert and professional services, or with the amount paid for selling real estate or bonds, will convince one that in consideration of what it really covers, the charge is very reasonable. The architect ought to be compensated for his expert knowledge and for services of a varied nature, including business management, purchasing, and practical, scientific and artistic ability.

It costs the architect more to serve a church than a commercial enterprise. More time is consumed with committee meetings and in consultation with the pastor, or with interested members of the church who seem to have a great deal of time to spend in his office. In a business building the floor plans of several floors may be duplicated, whereas in a church nearly every room requires individual study. Unfortunately, it must be admitted that many architects of excellent ability are not anxious for church work. We have collected a long list of reasons for this which need not be stated in full here, but some architects have complained that certain building committees are decidedly unethical, to say the least. They will take an architect's preliminary plans, which have cost him much thought and money, and then turn the same over to a local architect. Some churches with irregular committee meetings, neglect and postpone the payment of bills. In some sections of the country churches have the reputation of seeming to encourage cheapness. The church more than any other institution should be self-respecting in employing competent service and paying for it, thereby retaining confidence and preventing disappointment. Cut-rate charges usually indicate limited service or the use of stock plans or repeated treatments of the various parts of the building. Too often a cut-rate architect leaves important items out of the plans and furnishes an insufficient number of detailed drawings. This means that during the construction of the building the contractor or the committee sees the necessity of making changes or of adding forgotten items, which,

as "extras," cost a great deal more than if they had been fully indicated in the original plans and specifications.

The following schedule indicates briefly the five divisions of architectural service with the usual accepted division of the charge:

Architectural Service		Division of Charge on Basis of 6% of Cost of Building
Division I.	Includes *preliminary drawings* and *sketches*. These need to be revised until a satisfactory floor plan and design of the exterior have been approved and rough estimates of the cost secured. Sometimes six to eight or more sets of preliminary sketches will be required before a decision should be reached	1⅕% of the cost of the building
Division II.	*Construction or working drawings.* These are not ordered until the work in Division I has been satisfactorily completed and the preliminary drawings reviewed by the Church Department of Architecture or other consultant. For a church building this section often requires twenty-five to forty sheets of drawings from which many copies of blueprints must be made	1⅕%
Division III.	Preparation of *specifications*, contract documents and letting contracts. Specifications need to be thorough and complete, leaving nothing to the imagination of the contractor. This requires 160 or more typewritten pages for a church building costing about $150,000. At this stage three fifths of the architect's fee should be paid.	1⅕%
Division IV.	*Detailed drawings* of certain parts of the building—windows, doorways, trusses, sections of the wall, stairways, chancel furnishings, symbols, etc. Only thorough and careful work in this division will prevent ruining those elements that give the building its significant character[1]	1⅕%
Division V.	*Supervision* of the construction, letting of contracts, auditing of accounts, approving payments, etc. Architectural supervision is necessary to secure a satisfactory outcome	1⅕%
	Total minimum charge	6 %

[1] A charge of upwards of 12-15% or more is made for large size detail drawings of some woodwork.

Have all the agreements with the architect fully specified in a contract and do not ask the architect to proceed with his work until a contract covering either the service indicated in Division I or the complete service has been signed.

The Consulting Architect

Quite often there is a considerable advantage in employing an architect or a consulting bureau highly competent in church work to render the services indicated in Division I. An arrangement is made whereby a consulting architect is employed for this service and to advise the architect who renders the balance of the service throughout the entire process. The consulting architect checks the working drawings and specifications and continues to counsel the associate or local architect. Sometimes the consulting architect will have highly skilled draftsmen to prepare some of the detailed drawings, as, for example, of the window tracery, doorheads or interior woodwork, the associate architect compensating him as may be agreed upon.

When the consulting architect renders all of the service in Division I, the Building Committee then selects an associate architect who will deduct from his fee at least the amount expended by the committee for the services already rendered. There are many advantages in this plan. The associate architect may be employed to prepare the working drawings and specifications and superintend the work of construction, but he will have the advantage of having all of the preliminary floor plans and designs prepared by one who is highly proficient in this division of architectural practice. In the case of church work the denominational Bureau of Architecture can usually save the Building Committee and the associate architect a great deal of time and energy by performing all the services indicated in Division I. The church is assured of plans that will meet all requirements and insure a building of distinction. The associate architect, who is usually busy with his general practice, is assured that he has expert

service and is saved the one division of architectural work that will require a great deal of his time if he has not already had wide and distinctive practice in church building.

Better results will be secured by employing a denominational bureau or other consultant with a first-class architect who has not built churches, than by employing a mediocre church architect (so called) who will use his own cut-and-dried methods. The consultant must, of course, be thoroughly familiar with the work of the church as well as competent in the practice of architecture. The associate architect will have a very real opportunity to exhibit his own knowledge and ability in the development of the drawings. Locally his reputation will be enhanced since he will be recognized as being practically the architect for the building. By associate architect we mean any architect employed to complete the architectural service, although he may not live in the same community in which the building is being erected. There is a tendency to specialize in architecture as in other professions. Sometimes a church will have to go far from home to secure satisfactory service. In general practice some of the most notable work in certain types of building on the Pacific Coast was done by New York architects.

In dealing with an architect the Building Committee must be thoroughly familiar with its own requirements. It need not undertake to tell the architect how to meet the requirements, for that is what he is paid for, just as the physician is paid to write a prescription. He can usually do it better without the patient's advice. The committee or the consultants must clearly specify the requirements. A statement should be prepared indicating the desired capacity of each room, with the number of square feet that must be provided for each attendant. If an architect offers to plan a building of certain capacity, he must state the number of inches allowed for sittings in the pews, and the number of square feet provided for each sitting in the other rooms, ceiling heights, corridors, etc. When he

estimates the cost of a proposed building, have him state upon what cost per cubic foot he bases his estimate. Then visit some buildings in the vicinity constructed for this estimated per cubic foot cost and determine whether a similar quality of construction and facilities would be suitable. Secure this cubic foot cost estimate during the preliminary plans and determine whether the plans are to be developed on the same scale, reduced in size, or enlarged.

Do not approach the solution of the building problem by stipulating at first the maximum cost of the proposed building. First of all, secure preliminary plans that will indicate a fully adequate solution. After two or three preliminary floor plans have been presented, a definite decision should be reached as to whether the plans shall proceed on the basis indicated. Do not expect the architect to continue preparing preliminary sketches indefinitely but give him definite instructions after he prepares the second or third set of sketches and indicates the cubical contents.

Do not ask the architect to follow in his plans the lay-out or features of some other building nor to govern his plans by the use of old materials, old windows, etc. Every church building problem must be studied individually. Beware of stock plans whether in or out of a catalogue. Do not discuss how the building will look or how it will be roofed over until the preliminary floor plans have been prepared, clearly indicating a well-arranged provision for all the requirements. A well-arranged plan will make a good exterior design possible. The architect must be given sufficient time and be left uninterrupted to develop and refine his plans, thereby saving money and securing a better result. Too often building committees casually discuss a building enterprise for several years, then suddenly reach a decision to build and are impatient if the work of construction is not gotten under way immediately. After the preliminary drawings have been approved, an architect should be allowed probably three months to prepare the working drawings and specifications for a building cost-

ing $100,000. Then three weeks should be allowed the contractor to make his estimates and prepare his bid. Some architects, of course, will promise to turn out a set of drawings within a few weeks but the church is unwise to accept such service.

Ordering Working Drawings

If the church does not engage cut-rate incompetent architectural service, a comprehensive study of the problem can be made during the period of the preliminary plans. These plans will be brought to such a stage of perfection that no expense need be incurred in changing them and close estimates of the cost may be secured in advance of ordering the working drawings and specifications. Two churches discarded plans that cost $6,000 and $11,000 respectively, because they did not determine whether they would be justified in carrying their plans forward on the scale clearly indicated by the architects' preliminary drawings. The congregation should be kept fully informed regarding the development of the plans and its authority secured before working drawings and specifications are ordered. Have the architect prepare black-and-white drawings to be used for the prospectus and for stereopticon slides. See that this item is included in his contract, but do not expect to get such service within the amount of a cut-rate fee.

The architect should be directly responsible for designing, planning, and supervising the heating equipment, also for the lighting equipment and fixtures and all permanent furnishings, for the lighting fixtures, chancel furnishings, and pews are of great importance architecturally. For the architect this is nuisance work, involving a great deal of time in interviewing salesmen, preparing detailed drawings and supervising installation, but he should be held responsible for all these features. Only in this way can the work be properly controlled and co-ordinated.

CHAPTER IX

RECAPITULATING THE BUILDING PROGRAM

A BUILDING program schedule should be planned to indicate in an orderly procedure all of the steps in the proposed enterprise. A copy of this schedule should be given each member of the general committee, together with a clear statement of his own responsibilities. Too many churches begin a proposed building program with enthusiasm but with no clearly defined outline of the progress desired. Some building enterprises come to unfortunate ends or never get started for lack of a competent leader who will faithfully chart a comprehensive program of progressive effort which can be wisely followed through a period of years. The program schedule will enable the committee to anticipate the various important details and prevent delays. In average situations it should cover a period of at least two years. The following indicates some of the items to be included in the schedule. Like all suggested programs it must be adapted.

1. A survey of the community, including religious census.

2. An evaluation of the church program in relation to all the religious, educational, and social needs of the community.

3. A study of ministries and activities needed.

4. A survey of the present church plant from the standpoint of needed service.

5. Enlistment of leadership for the forward program.

6. Authorization of the findings or survey committee to make definite recommendations.

7. Presentation of a statement of needs and proposed program to the congregation.

8. Authorization of a general building committee or building council to organize and proceed to survey resources, outline a proposed program and secure preliminary plans.

9. Engage consulting service.

10. Study of location and site.

11. Selection of architectural service either for the services outlined in Division I (page 89) or for complete services. Prepare check lists.

12. Designate one person for all official contacts with the architect.

13. Preparation of preliminary plans, estimate costs, perfect preliminary plans, prepare construction program for submission to congregation.

14. Develop the promotional campaign.

15. Secure approval of construction program by congregation.

16. Financial program submitted to and adopted by congregation.

17. Employment of financial experts if desired.

18. Complete preliminary plans and secure close estimates of cost.

19. Prepare prospectus and advance the promotional work.

20. Advance leadership training program.

21. Financial campaign.

22. Authorize architect to proceed with working drawings and specifications (see pages 89, 93).

23. Keep interest up and stimulate collections. Several weeks will be required to complete the working drawings and specifications and secure contractors' bids.

24. Prepare carefully a list of contractors to be invited to bid. Investigate their ability, financial rating, etc.

25. Submission of working drawings and specifications for bids.

26. Upon reception of bids, decision as to whether entire plant as planned or units of same should be built and secure authorization from congregation to let contract.

27. Select equipment.

28. Inspection of construction.

29. Development of organization for the work possible in the new plant.

Interesting and trying problems will arise during the planning and construction period. A happy settlement will depend upon the expertness of the consultants, architects and builders employed, and their interest in the church. Competent service must be employed and empowered if the work is to move along smoothly and steadily.

Employing the Builder

We have emphasized the importance of capable leadership and sympathetic, expert architectural service. It is also highly important to have a very competent builder. Several able firms are taking a vital interest in church building and some are developing excellent craftsmen and mechanics.

Have it clearly understood from the beginning that the contract is not necessarily to be given to the lowest bidder. There may be many reasons why the lowest bidder should not receive the contract. First, however, prepare with the architect a list of contractors who are to be invited to estimate. The architect will then supply each contractor with a set of specifications and blueprints of the working drawings. Open the bids only in the presence of the architect. It may be well to warn the members of the committee to give out no information regarding the bids until and in such manner as agreed upon. If the bids seem excessive, prepare immediately with the architect a program of possible alternatives of materials (but without too serious a cheapening of the qualities) and if possible have the two or three lower acceptable bidders submit alternative bids.

Before signing a contract with the builder several items need to be considered. Examine his list of subcontractors and determine whether they have a reputation for competency and reliability. Determine whether the contractor can be bonded to fulfill his contract without danger of

liens being filed by subcontractors or mechanics. Learn of his record for good relationships with his labor. Learn whether he takes a real and sympathetic interest in the building of the house of God or whether he is only a broker for subcontractors.

Guard Against Cheapness

There are many ways to cheapen the cost of a church

EDUCATIONAL UNIT FOR NEW CHURCH BUILDING, RICHARDSON PARK (METHODIST EPISCOPAL), WILMINGTON, DELAWARE
(Rear View)

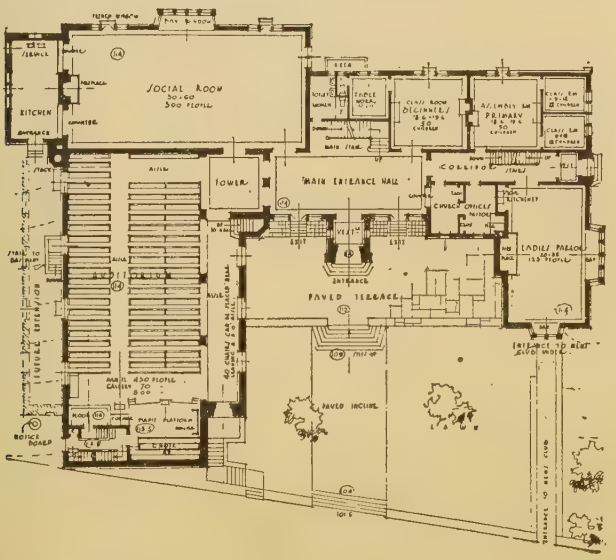
building, but all lowering of cost at the expense of sound architectural and building principles is sure to cause much grief and to handicap the work and growth of the church. One church avoided the cost of making a survey of subsoil conditions. When the builder excavated for the heating plant, quicksand was discovered. This required extra work on the part of the architect and contractor, all of

which had to be paid for, in addition to the expense of delay. Foundations may be cheapened by disregarding spotty conditions in the soil. Uneven settlements will follow such a method, causing cracks, loosening of plaster and leaky roofs and walls. One reason why some buildings cost more than was at first anticipated is because of the employment of cheap service and methods. When a church insists upon the contractor cutting his price to a stated maximum, the same quality of materials and labor cannot be expected. Soft bricks, cheapened wall plaster, lumber, and other material of inferior quality not only require an excessive expenditure in the end but cause dissatisfaction and prove detrimental to the work of the church. The roof may be so cheapened that the interior of the building may be ruined through leakage. Not only the first cost must be considered but the cost of maintenance and upkeep of the building and all its mechanical equipment, flooring, etc. A cheap contractor may employ incompetent or discontented labor, placing the whole enterprise on an uncertain basis. Entirely too great an emphasis has been placed on cheapness in church building. Perhaps this has been in an endeavor to avoid debts, but it is not an efficient method. There is a cheapness that is the worst possible form of extravagance. A church board received an estimate of $140,000 as the cost of their proposed building. They had this cut to below $100,000. Then followed a period of constant bickering, complaint, and general dissatisfaction because the people saw that they were not getting everything in the way of space and quality that they had expected to receive for $140,000. Now they find they could have paid for the $140,000 building easier than they will ever raise the money for the $100,000 unsatisfactory structure.

Avoid Oppressive Debts

In all too many cases oppressive debts result from hasty and illy planned programs. In some denominations more energy is expended in paying debts on inadequate build-

ings than in planning properly for advance programs. We offer a few suggestions growing out of various experiences: Have a building well planned for the work expected of the church and have its exterior well designed. Base the entire enterprise on thoroughly religious motives. Have all financial matters in keeping with truly ethical methods. Employ expert consulting and architectural service. Have the plans so thoroughly studied that extras will not be necessary.



Main-Floor Layout for Town or City Church

Face squarely the cost during the development of preliminary plans. Have the building so planned that if necessary the educational unit may be built first, the church hall being used for worship until the sanctuary can be constructed. A church should not be discouraged if during a period of five years it cannot do more than plan, finance, and build an adequate educational unit with a second period for the auditorium. This is better than reducing the size below that required and cheapening the quality.

CHAPTER X

BUILDING FOR WORSHIP

In divine worship the human personality enters into its most sublime experience. If the service appointed for worship does not make the Divine Presence appreciable and does not inspire or comfort or create humility of mind, it fails of its purpose.

By experience we know that the architecture of the room consecrated for worship has a direct effect upon the service. The room must create environment for the soul just as a sublime scene in nature, on land or sea, has its peculiar effect upon the thoughtful. One of the reasons why architecture is of such vital importance in worship is that we cannot always worship God in some majestic setting in nature. In worship the great spiritual experiences of the race are to be recapitulated. Again we are to see the burning bush and the glory of God in the temple. In holy worship we must be brought face to face with the tremendous facts in human history, the venture of Abraham into the unknown, the crucifixion of Jesus Christ, and the achievements of the saints. When we realize the primary importance of worship, we will understand that not just any kind of a hall or meetinghouse will be best suited to this holy experience.

One of the most hopeful signs of a reaching out for a better spiritual culture in America is the present emphatic revival of interest in providing the proper setting for services of worship. This revival is not confined to any one denomination but is prominently expressed in nearly all of the nonliturgical (so called) denominations. It is quite time that the Protestant churches come to this position. No account has been kept of those who have left the "non-

SECOND UNIVERSALIST CHURCH, BOSTON, MASSACHUSETTS

liturgical" churches for those that are more careful of the service of worship. Every minister who has had his eyes open knows of the tremendous appeal that is made by the services where God and worship are glorified and where

Trinity Lutheran Church, Fort Wayne, Indiana

the service has not depended upon the personality of the more or less transient minister. Just at the time when many evangelical churches have been closed in our great cities churches that hold worship in high regard have built some of the finest structures in America. Ugliness, ill-taste, and

incongruity in Protestant churches may help to drive many folks out. They do not all turn to the more liturgical churches, but continue to set up various cults where they think some undefined but very real need will be supplied.

Several very worthy books and articles have appeared on the subject of worship, so we do not need to enlarge upon it here. The demand for reality in worship lays a definite responsibility upon the church builder, and he needs to steep himself in the psychology of worship, not of primitive man but as required in modern life.

The Sanctuary

Auditorium is a poor term. Sanctuary is better. A hall or theater may have an auditorium. The sanctuary should be oblong in plan with the proportions of length, width and height carefully studied. A square plan or one that is greater in width than in length is very bad. To develop a focal point of interest and concentration of attention in such a sanctuary is difficult, if not impossible. The combination of corner pulpit, bowled floors, circular pews, flanks of folding doors, with resulting costly construction, is not churchly and should never have been thrust upon the church in defiance of all the obvious requirements for reverence, repose, and inspiration.

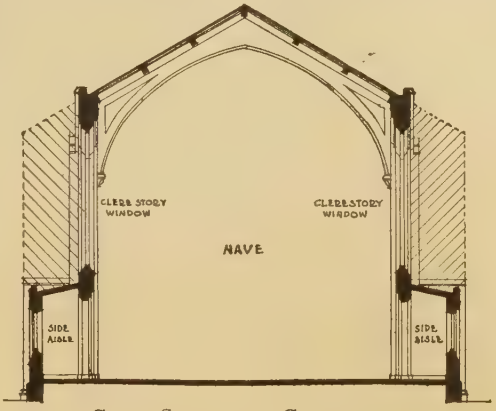
The Nave

The nave is the body of the sanctuary. It comes from *navis* (L.), meaning "a ship," and the term is a relic of the time when the church building was conceived of as a ship bearing Christian souls over the sea of life to a safe harbor. The nave should be at least twice as long as it is wide; the height at least equal to the width. The chancel must be at one of the narrow ends. In this manner of planning the maximum number of worshipers is seated in front of the chancel. The floors should be level and the pews and aisles straight. A sloping floor in a church is of no real

Saint John's Protestant Episcopal Church,
Buffalo, New York

advantage. If the height of the pulpit is increased a few *inches*, this will compensate for any advantage of pitching the floor a corresponding number of feet.

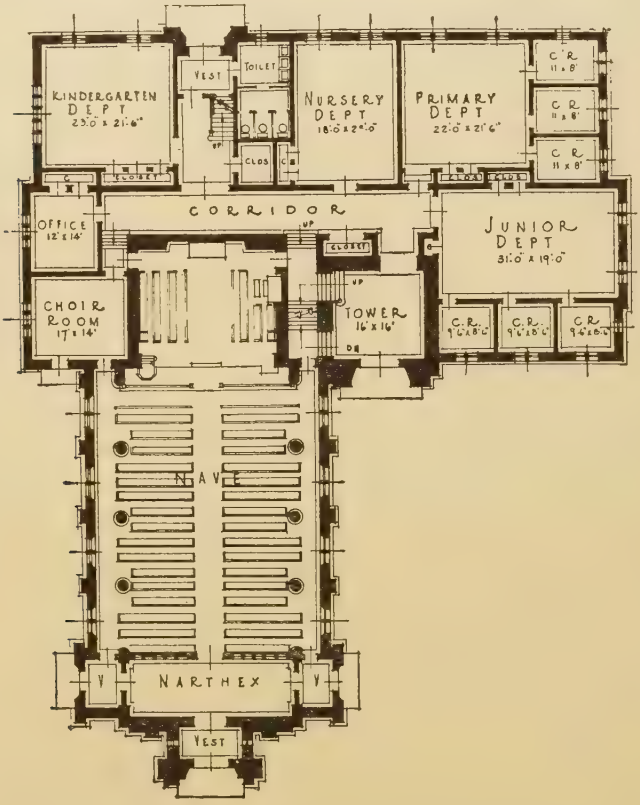
In securing pleasing and impressive proportions, as well as other advantages, the clerestory church has many excellencies. A sense of greater proportionate height is possible. Light is admitted from the clerestory windows nearer the middle of the nave, while the side aisles provide intereresting shadows, eliminating any suggestion of glare or brassiness. The shadowed portion in the sketch indicates the space saved permanently in figuring the heating requirements. The assumed loss of the few seats back of the pillars is far more than compensated for by the general effectiveness of the whole. In practice it will be found that only a few seats are lost, not nearly as many as when the auditorium is too wide and those seated on the sides of the room are outside the direct line of vision from the pulpit.



CROSS SECTION OF CLERESTORY

There has been a regrettable tendency in America to build our churches of too great a width. If there is no clerestory, the walls must be carried up to a greater height, risking a barnlike appearance; if the ceiling is too low, the room appears squatty. Another fault has been to have the sanctuary too large. The growing opinion is that it should be of such size that it will be well filled on normal occasions; that overflow seats would better be provided in side aisles and transepts with a balcony only over the narthex; that a room of fine proportions and good materials will be

used more in total than a structure that is often only partly filled and where refinement and quality have been sacrificed for size and ill taste. It is unwise to allow the needs of an occasional convention to determine the size of the



TYPICAL FIRST-FLOOR PLAN FOR A MODERN CHURCH

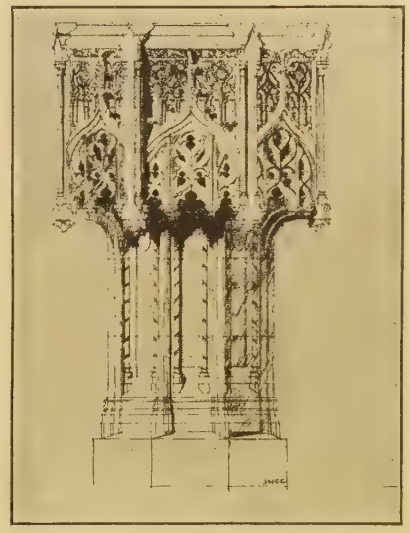
Each room is protected from intrusion of sound by solid partitions. The sanctuary given churchly treatment and protected by solid partitions. The plan illustrates the rooms and facilities that should, if possible, be provided on the main floor.

church auditorium. We doubt the wisdom of holding even a church convention in the sanctuary except perhaps its meetings of a more or less devotional character, allowing the business meetings and debates to take place in the

social hall, gymnasium, or even in an outside convention hall.

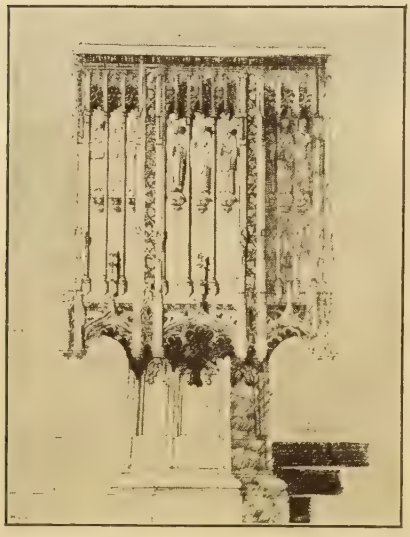
The Chancel

The chancel is the separated place in front of the church in the apse—if there be one—in which are the minister, the choir and the equipment required for conducting the services of worship and preaching. In some churches the chancel rail marks the division between the chancel and the space occupied by the worshipers. Sometimes the choir is located outside of the chancel; again it is felt that the members of the choir are properly a part of the ministry and belong within the chancel. In its details, of course, the chancel must be arranged to meet the requirements of the local society, but some general observations may be made. In most of the so-called nonliturgical churches there is a very marked increase in the use of the open chancel arrangement. In brief this open or churchly chancel arrangement calls for a point of focus or high light for the entire sanctuary. This is provided by giving the communion table a central position. This great emblem, representing the fellowship of Christ and his followers and the sacrifice made for humanity, might well be the object to which attention is first directed. In other churches an altar is required instead of the table. We have seen in a Methodist Episcopal church both an altar and a communion



Baptismal Font, Church of the Saviour, Cleveland Heights, Ohio

table. At one side of the chancel is the lectern, devoted to the ministry of reading the Scriptures and at the opposite side the pulpit, which gives the ministry of preaching a separate, distinct, and permanent setting. The baptismal font, a constant symbol of entrance into the Christian fellowship, is just within the railing or in some permanent and dignified position. Where a transept is constructed, the font may be at the head of the transept, giving the fine effect of a side baptistry chapel. An old church method was to have the font near the entrance to the church, symbolizing the doorway into Christian fellowship. In some churches the baptistry must be located as the central focal feature in the chancel.



PULPIT FOR CHURCH OF THE SAVIOUR, CLEVELAND HEIGHTS, OHIO
(Methodist Episcopal)

The leader in church building will need to study the chancel arrangement carefully from every viewpoint, for it is the culmination of the entire sanctuary and upon its arrangement depends to a very considerable degree the effectiveness of the services of worship. Such excellent books as Dr. Von Ogden Vogt's *Art and Religion; The Technique of Public Worship*, by Odgers and Schutz; *Reality in Worship*, by Sperry; should be read in this connection.

A successfully planned chancel helps to create an atmosphere of worship before the service begins and fosters a spirit of reverence, thus preparing the people for the ministry of preaching. When the minister leaves the lectern and takes his station in the pulpit the attention of the

congregation is thereby drawn to a new point, which is also in harmony with the whole of the chancel, and the sermon is begun with a considerable advantage. The service throughout is greatly improved by the variety of movement and the stimulation of attention. In a building thus planned it is not easy to conduct a service carelessly or flippantly.

CHURCH OF THE SAVIOUR, CLEVELAND HEIGHTS, OHIO
(Methodist Episcopal)

Provision for the Holy Communion

Give to the table of the Lord the position of honor due it, with nothing but the communion rail between it and the people. To place the communion table in a narrow passage, or to overshadow it by a so-called pulpit desk, is to detract from the high significance of the service and all that it represents in the life of the Christian Church. This solemn and beautiful sacrament should be conducted with dignity and without evidence of haste. With well-trained ushers, and a sufficient number of qualified assistants. This is possible even when there are large congregations. Only by orderly and reverent conduct of this sacramental service will its high spiritual objective be attained.

Many churches now provide a piscina—a niche in the wall near the communion table, with a water pitcher and drain where the minister may be seen to cleanse his hands before the administration of the elements.

When not in use, the communion vessels should be deposited in a place set aside for their safe keeping.

Provision for Kneeling

A Litany desk or *prie dieu* in front of the clergy stall

Piscina, Church of the Saviour, Cleveland Heights, Ohio

and beside the lectern, where the minister may kneel at certain times during the service, is a very suggestive and effective addition to the chancel furnishing. Kneeling

benches hinged to the pews, and made noiseless by the use of rubber knobs, will encourage the people to kneel in private and public worship, and especially during the communion ritual. Failure to provide these conveniences

Plymouth Congregational Church, Fargo, North Dakota

has contributed to the lack of reverence that is all too often evidenced in our congregations.

The Narthex

A roomy vestibule, heated in cold weather, and provided with coat racks, unless there are coat rooms adjoining, is not only a much-needed convenience but practically a necessity. There should also be a few seats here, so that ushers and late comers may await the opening of the doors in silence, and enter the sanctuary reverently.

It may not be amiss to suggest that complete provision for public worship will include suitable garb for minister,

choir, and ushers, thus giving a uniform appearance to all the ministrants in the house of the Lord. Convenient rooms and storage closets are needed.

The Chapel

In an increasing number of churches the chapel is coming to be regarded as an essential feature. It should be churchly in character, neat and tasteful in every aspect,

Chapel in Church School Wing of First Methodist Episcopal Church, South Bend, Indiana

the walls, of course, being of solid construction. The room should be furnished with a chancel rail (if the main sanctuary is so furnished), a communion table and a lectern. A superintendent's table may be brought in when the chapel is used for a church-school assembly. The communion table should never be used as a desk or as a depository for books and other articles. A chancel window of good

design adds much to the devotional atmosphere. The chapel should be large enough to accommodate the attendants at the young people's devotional meetings and such midweek devotional services as are not held in the main sanctuary. It provides an excellent assembly room for the Junior Department of the church school, and its worshipful atmosphere conduces to the cultivation of reverence at

First Methodist Episcopal Church, Gary, Indiana

this very strategic age. It is convenient for special communion services, weddings, and as a chapel for funerals. The chapel should be open daily for private worship.

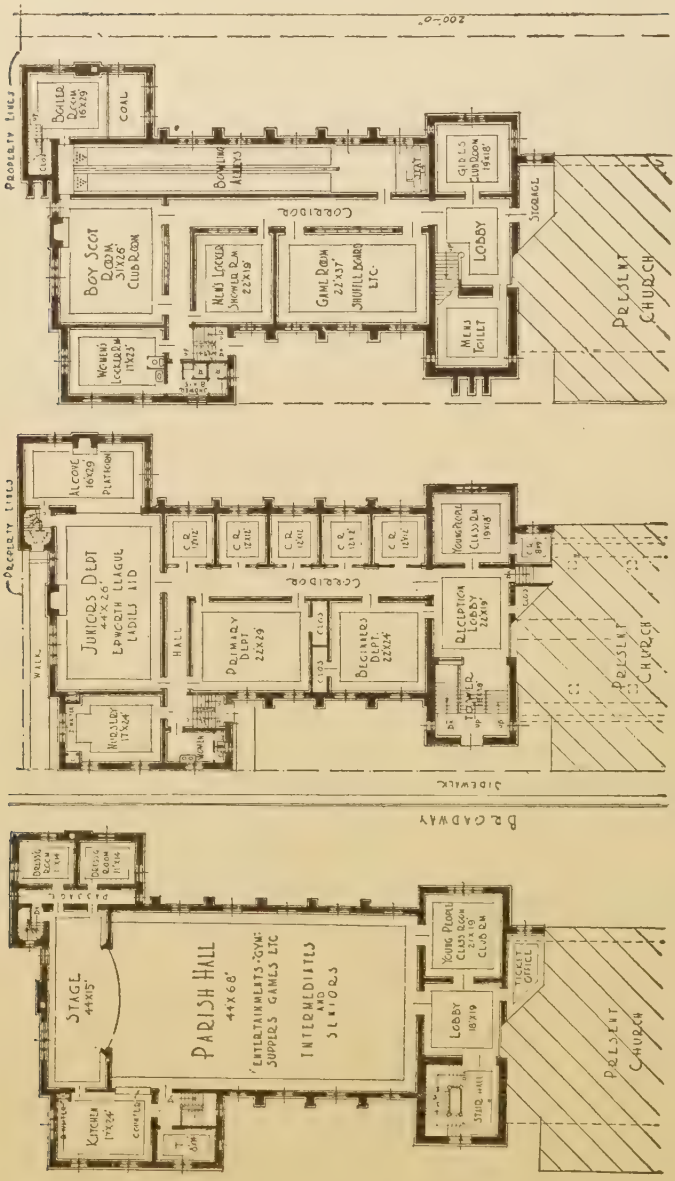
Rooms Auxiliary to the Sanctuary

Certain auxiliary rooms are needed in connection with the service of worship, including one for the choir assembly, for preparation for the service, and for the devotional moments with the pastor before entering the sanctuary.

This room should be fitted with wardrobes for vestments, bookcases or built-in cupboards for the music and choir hymnals; and mirror and lavatories should be conveniently located.

Unless the study is located near the chancel, or perhaps in any event, there should be a room adjacent to the chancel for the minister's preparation.

Church of All Nations, Los Angeles
(Methodist Episcopal)



EDUCATIONAL ADDITION OR FIRST UNIT OF FUTURE CHURCH PLANT

CHAPTER XI

BUILDING FOR RELIGIOUS EDUCATION

Splendid advances have been made in church-school methods and curriculum planning, but the buildings in which the workers are compelled to render their highly important service are often woefully deficient in the minimum requirements of an educational program. Separate rooms for departments and classes which are so essential for successful teaching are luxuries. One State Sunday-school secretary reports that in his State, with a population of nearly three million people, there are only three church buildings—two Baptist and one Presbyterian—that are adequately equipped with departmental and classrooms. Church-school leaders are much concerned about the slow advance in Sunday-school attendance as compared with the growth in population. This condition should not surprise us, for the depressing contrast between the public-school buildings and equipment and the rooms used for religious instruction is so glaring that one wonders how the youth can feel that religious training is as important as secular education.

The church that is not equipped so that the ministry of religious education can be conducted properly will soon be heavily discounted by the community. The leader in church building must give most careful attention to this part of the program, because a successful ministry of religious education is vital to the whole Christian enterprise, and the children too often lack a needed champion on the Building Committee. When the architect discovers that a committee which has commissioned him to plan a new church is not well informed regarding the requirements of a religious educational program, he will do well to inquire at the denominational headquarters for guidance; otherwise he

may give the people a building plan that will handicap the ministry which they certainly will be expected to render. We are asked occasionally to review drawings on which the terms "Sunday-school room" or "main school" are marked, indicating that the plans were drawn by one who is not acquainted with the requirements, or that he has given the committee what it wants rather than what is needed.

We do not wish to suggest a slogan, but the modern church building might be called the departmentalized building. It is departmentalized as to the various age groups to be accommodated and for the ministry and activities to be sheltered. The department groups correspond with the age groups recognized by experienced teachers and leaders. The various stages of the developing life and interests must be recognized and the program of worship, instruction, and expression graded and planned accordingly. Leaders in religious education seem to be in general agreement as to what the nature and need of the child require. There is still some discussion regarding the ideal size of the class, some urging small classes for intensive teaching and close personal contact between pupil and teacher; others urge larger classes with better trained teachers. In any event a teacher and class need a room protected by sound proof partitions. Folding or movable partitions of any type are not advised. They cost more than real partitions, take more space, are usually unsatisfactory in operation, do not prevent interruption by sound from the adjoining room, cannot be used for decoration as ordinary walls may, are unsightly whether opened or closed, and give a temporary aspect to the room. If the school building is properly planned, with rooms of various sizes, well studied corridors and stairways, level floors and solid partitions throughout, it will not be difficult to adjust its use to variations in requirements. Of one thing we are quite confident—the nature of the child does not change fundamentally and the church is better acquainted with that nature now than ever in its history.

DEPARTMENTAL GROUPS AND DISTRIBUTION OF SPACE

Departments	Ages for Each Department	Grade in Public School	Usual Percentage of Total School (Not Including Cradle Roll or Home Department)	Floor Space Per Pupil in Attendance
A—Elementary Division				
Nursery	To 4 yrs. old		3–4%	15 to 20 sq. ft. (25–30 sq. ft. desired by some workers)
Kindergarten (sometimes called Beginners)	4 and 5 yrs.	Kindergarten	8–9%	15 sq. ft. (*sufficient rooms so that not more than 25 to 35 occupy one room*)
Primary	6, 7, and 8 yrs.	I, II, III	12%	A room for worship 6 to 7 sq. ft. for each attendant. Class rooms 9 sq. ft. for each
Junior	9, 10, 11 yrs.	IV, V, VI	13%	6 to 7 sq. ft. in assembly room. Class rooms 9 to 10 sq. ft.
B—Young People's Division				
Intermediate	12, 13, 14 yrs.	VII, VIII, IX Junior High School	12%	Same amount space as for Juniors
Senior	15–17 yrs.	X, XI, XII Senior High School	11%	Same amount of space as for Juniors
Young People	18–23 yrs.	College	15%	6 sq. ft. in assembly room, 8 to 9 sq. ft., using tablet arm chairs in class rooms
C—Adult Division	24 and above		25%	7 to 9 sq. ft. in chairs or table arm chairs

The groupings listed above need not in every case be adopted arbitrarily. In some cases there will be Junior high-school and Senior high-school Departments. Individual adjustments must be made. The percentage of total space to be assigned to any one group will vary. The ideal arrangement would be to have not more than one class remain in the assembly room during the lesson period. The matter of great importance is for the church definitely to develop a suitable and reasonable program of religious education that would seem to enable the church to meet its responsibility in this field and then present it in plain terms to those who are to write the building program. The preliminary plans offered by the architect must be checked to see that the building as planned will enable the church-school workers to do their work well.

The departmentalized building with assembly and class-rooms is not an extravagant form of construction. It is really an economical method. Pupils may sit closer in assembly than in class groups. During the study period the permanent insulated partitions enable the class groups to be placed close together but without annoying each other. Constructed along straight lines, with a minimum of gallery construction or open wells, it is much more economical than the obsolete Akron style or any of its variations.

Department Rooms

Fortunately, environment can be made for children. We can determine what the church-school environment will be. The church has the child almost as soon as he can toddle and has the opportunity to produce impressions that cannot easily be lost. The departmental and graded system of building admirably faces this challenge. In the department assembly room the excellent programs of worship and activities adapted to the peculiar needs of the group may be conducted without distracting interruptions, and with increasing influence on the pupils' character. The room may be furnished, decorated, and equipped in

accord with the mental and spiritual world in which the child of a particular grade lives. Because the world of the child is constantly changing, the church builder must provide several department rooms. Departments of as few as twelve pupils are successfully conducted when the program is suited to the needs as dictated by the nature of the child. If a general assembly of the entire school is insisted upon, this can be held once in two or three months in the sanctuary and a carefully prepared program of worship and inspiration conducted.

Fireplaces, moldings, well-studied windows, built-in cabinets, bookcases, etc., all add to the charm and practical usefulness of the department or grade rooms.

Relative Space to be Allotted to the Department

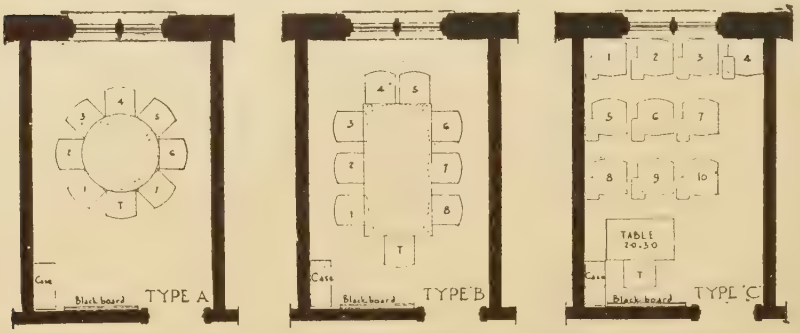
Study the chart on page 12 and then prepare a chart for your requirements after the utmost study of the constituency and possible trends of future growth. Then specify the requirements and preferred location for each department or class. In one church, costing half a million dollars, it was found that the Primary Department room was so small that the children of this very important group had to be placed in a cheerless dining room on a concrete floor while the adults had an abundance of space in pleasant rooms. Churches were built in the year of grace 1927 in which the best possible kitchen equipment was installed and the Beginners and Primary pupils were placed in basement rooms on bare concrete floors. This speaks badly for the state of grace of those who controlled the planning of such buildings.

Classrooms

Separate classrooms alone can make it possible for the instructor to work in harmony with the nature of his pupil. Environmental influence is effective in the classroom as elsewhere, so the atmosphere of this room must

be one of friendliness, warmth, orderliness, studiousness, business. Classrooms are needed in all departments above the nursery and kindergarten.

The color scheme in the classroom may be the same as in the assembly room. A blackboard should be affixed to the wall opposite the window. The walls, of course, are



PLANS FOR 8 Ft. x 12 Ft. CLASSROOMS, SHOWING EQUIPMENT AND SEATING CAPACITY

of solid construction with a single hinged door. Strips of moldings should be in place for hanging pictures, lesson posters, etc. The cut indicates furnishings and seating capacities in class rooms 8x12 feet in size. We question the advisability of constructing rooms of less size—the so-called Pullman or efficiency classrooms, where the pupils must sit on benches and where the pupil at the end opposite the door cannot leave the room without disturbing others. Guard against inside classrooms or stalls with open fronts.

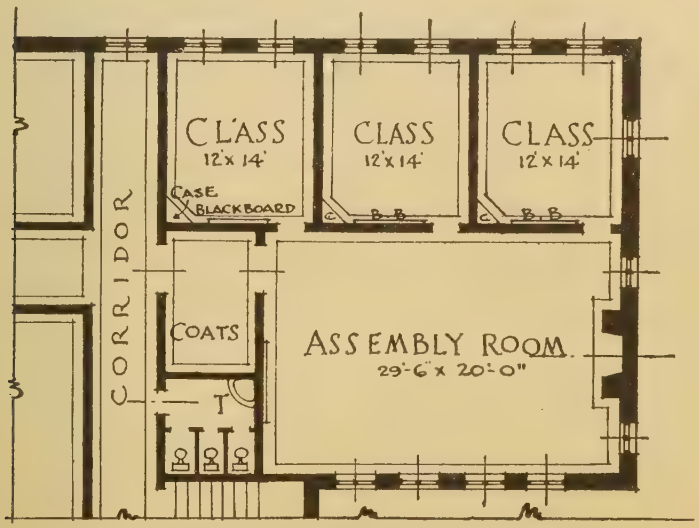
Cloak Rooms

Teachers and pupils in a church-school room, with hats and coats on, give the appearance of simply being there on a brief visit and not for any serious purpose. Orderliness and the comfort of pupil and teacher require that cloak rooms or built-in wardrobes be provided for every department. It is an advantage to have the cloak rooms so placed that wraps may be discarded before entering the room,

except in the nursery and kindergarten departments, where children require help with their wraps.

The Elementary Rooms

Each department assembly and classroom requires individual study and treatment. The rooms for the elementary departments especially should be as attractive and cheerful as it is possible to make them. They should be on the



A Departmental Unit

Note each room with outside light and solid partitions. Coat room, fireplace in assembly room, blackboard and built-in case in classrooms.

main floor and in the best location. They must be made appealing. The little child is vitally influenced by the room that possesses charm. Charm likes neither brazen nor inky blackness. Charm prefers coral to red, jade to clear green, mulberry to purple. Charm prizes a middle ground between shining brilliancy and dull drabness. More than any other element in finish and furnishings, color schemes determine the charm.

In the Nursery and Kindergarten Departments, the pro-

grams will be more or less informal. These rooms provide the transition from the home to the Father's house and should partake of a homelike atmosphere. Classrooms will not be required in these departments but the rooms should be limited in size to accommodate not more than from twenty-five to thirty-five children. For illustration, if seventy-five pupils under six years of age are to be provided for, there should be three rooms, one for the nursery department and one for each of the two kindergarten grades. Twenty-five pupils in one room is quite a sufficient number to occupy the attention of one departmental superintendent.

The Nursery Department

The children just beginning to attend church school should not be put in the same room with children who have been coming for one or two years. A Nursery Department room is needed. It is sometimes called the Cradle Roll room, but this term should be reserved to designate Cradle Roll children who have not yet begun to attend church school regularly. The nursery room is used also for babies and small children during the services of public worship in the church.

The Kindergarten Room or Rooms

At least fifteen square feet per attendant should be provided. The small child requires much more space than the adult. Twenty-five square feet of space for each child in the nursery and kindergarten is not to be considered extravagant. The ceilings in these rooms should not exceed eight feet six inches in height. Some workers request that the window sills be low enough for the child to look out, but this sometimes complicates the problem of placing recessed radiators which should be under the windows so as not to weaken other sections of the wall. But make every possible effort to appreciate the size and mind of the little child and provide a room that he will feel is his

KINDERGARTEN DEPARTMENT, HIGHLAND METHODIST EPISCOPAL CHURCH, SOUTH, BIRMINGHAM, ALABAMA

BEGINNERS' DEPARTMENT, FIRST METHODIST EPISCOPAL CHURCH OAK PARK, ILLINOIS

very own and will not give him the impression that he is in the hall of a giant.

The Primary and Junior Departments

In the *Primary* and *Junior* Departments a more formal program will be conducted. Work of vital importance educationally is to be conducted. Classrooms will be required. Never place Juniors or other children in a gymnasium for their church-school assembly, and, of course, not in a basement room of any kind. The parish hall and

PRIMARY DEPARTMENT, FIRST PRESBYTERIAN CHURCH
BIRMINGHAM, ALABAMA

other general purpose rooms should be assigned to Adult Departments and classes. Junior assembly rooms should have something of the atmosphere of a chapel. If there is a chapel in the church building, this will provide excellently for the Junior assembly session, after which they may go to individual classrooms.

Young People's Division

In the many excellent study and expressional courses in religion, young people find a fascinating world, not of

instruction only but the actual experience of more complete living. The young people's groups and possible constituency should be surveyed and assembly and classrooms planned as required. The largest class in each group will probably remain in the assembly room during the study period. There should be three separate young people's departments—the Intermediate or Junior high school; the Senior Department, including Sophomores, Junior and Senior years in high-school and the young people of eighteen to about twenty-four. Classrooms of different sizes should be provided, for the class groups will vary according to congeniality interests, and the various courses desired.

The Adult Department

The church is not lacking in emphasis on adult education. The courses offered and the activities that may center in the church school and organized classes present an attractive field of endeavor. Proper housing of the adult classes and organizations must be provided, but they must not be allowed to crowd the children out of the most attractive parts of the building. Many churches have been well repaid for providing special men's and young men's rooms. Fireplaces and lounge furniture add to their value. During the week they are available for the same groups that occupy them on Sunday in church school.

General Notes on Planning the Church-School Building

1. Study the needs. Only by means of a thorough religious census can the church's full responsibility be determined.

2. Study the activities of a modern program of religious education. Write a program of requirements, thoroughly and comprehensively.

3. Check the preliminary drawings of the architect against this program. If the drawings indicate that the rooms have certain capacities, check the given capacities to see how many square feet are allowed each sitting.

4. Keep in mind the needs of instruction, expression, fellowship, and recreation.

5. Consider the plans with a view to possible later enlargement of the building. Provide adequate circulation (corridors and stairways) arranged so as to serve future additions to the building.

6. Avoid a factory-like and coldly mechanical treatment (however, factories are now receiving architectural treatment. Good environment makes better workmen).

7. Employ special consulting service such as the denominational religious educational workers or the church department of architecture. These agencies have a wealth of experience to offer.

Important Items Each of Which Requires Special Study

Special Rooms. Teacher-training rooms, workers' library, art room and missionary museum all add greatly to the effectiveness of the church's ministry.

Kitchenettes. These should be provided so that a departmental assembly room can be used by the department for social affairs where it would be inconvenient to use the main church kitchen.

Windows

For the windows of the church-school building use steel casements wherever possible, securing one of the several types that will not slam when blown and that will fit tightly. Casement windows operate easily to provide a slight amount of ventilation or can be opened to their full extent. It is unfair to require church-school teachers to lift heavy sash windows. The possibilities of window treatment from an architectural standpoint enable us to give distinctive character to the church-school rooms. Clear glass may be set in small leaded quoins. White cathedral glass gives a good effect. Colored symbolic medallions can be worked into the panels. The efficiency of a schoolroom must be secured in the church-school building, but there must be distinc-

tive touches so that every room will be easily recognized as a room in the Father's house. Window treatment will help make this possible.

Decoration

The decoration and furnishings of the room into which the child comes week after week form an important part of his environment.

Color Schemes

Color schemes depend upon the exposure, window space, and use of the room, but, generally speaking, two broad divisions can be made in rooms—those that receive brilliant light and those that receive little or no sunlight. North rooms are likely to be "cold" with little light. South rooms are likely to be "warm" with much sunlight. To counteract the feeling of chill and cold in the north rooms use colors which suggest sunshine and warmth ranging from light cream to gold. Rooms with southern exposure need restful, quieting colors—greens, blues, and grays in light tones. Avoid strong reds and yellows. White is sterile and cold. Children love strong colors, but they should not be in the mass as on the walls. It is better to add bright color bits here and there in decorations on the small chairs, tables, and pictures. The color scheme generally should present a restful background.

Pictures

Pictures are so essential to the atmosphere of the room that they should not be overlooked or left to chance selection. (See *The Use of Art in Religious Education*, by Albert E. Bailey.)

Drapes, moldings, rugs are all quite necessary and should fit into the general scheme of the room.

Chairs

Chairs must be of various heights. Some departments will require chairs of two or three heights in the same room.

Avoid chairs that evidently fail to give proper support to the child's back. Avoid folding chairs everywhere in the building except for emergency purposes. The denominational workers or department of architecture will gladly recommend several suitable makes of chairs which can be provided in various heights.

Tables

Study carefully the various heights required. Round tables for the elementary classes are recommended.

Blackboards

Be careful to locate these where they can be viewed without facing a glare of light. Have them so planned and framed that they will not produce an ugly spot in an otherwise attractive room. A corkboard panel at the top and sides may be stenciled and used for pictures. Some workers advocate a blackboard on standards rather than the built-in boards for the assembly rooms. For elementary rooms a combination blackboard with a cork or composition board surface on the reverse side can be made by a carpenter and hung on the wall.

Checking List

A checking list should be written and the preliminary plans carefully reviewed in connection with it. Suggestions may be secured from your denominational headquarters or the denominational department of architecture. The following items are only suggestive. Each committee should prepare its own list to correspond with the report of the Survey or Findings Committee. Some items suggested are:

1. List separate assembly rooms for departments—location and capacity.
2. Number and sizes of classrooms provided.
3. List all separate rooms needed leadership training room, library, office, missionary room, manual workroom,

etc. Study the needs of the week-day church school and of the Daily Vacation Bible School.

4. Cloak rooms or other facilities for the purpose.

5. Corridors—check sizes and see if sufficient to avoid passing through rooms and ample for easy circulation. Exits.

6. Window-sizes, height from floor, location, proposed design.

7. Ventilation, heat, and light.

8. Drinking fountains. Location and various heights.

9. What provision for sound-proofing walls and partitions?

10. Visualization equipment.

11. Can rooms be darkened in daytime?

12. Kitchenettes—location and size.

13. Blackboards.

14. Radiators recessed?

15. Electric outlets—number and location.

16. Chair list—heights to be provided and number of each height. Manufacturer selected?

17. Same for tables, etc.

18. Lavatories—location; juvenile fixtures?

19. Closets, built-in cabinets, etc., as required for storage of supplies and books.

20. Decorating scheme planned for each room.

The Educational Building as a Distinct Unit

A great many churches with quite substantial buildings are seriously in need of facilities for the improved educational and social program. Lack of such equipment results in a gradually decreasing enrollment and effectiveness in the entire church program. It is always a difficult task to remodel an old building for the new program; it can sometimes be done in such a manner as to care more adequately for several departments. A practical plan is to construct a new two or three story educational unit to house the elementary departments, the parish hall, possibly a chapel, and such other rooms as are desirable and possible. This

LAWNDALE, PENNSYLVANIA, METHODIST EPISCOPAL CHURCH
(Educational Unit)

unit is so located that, while it is connected with the present structure, it may later become the first unit of an entirely new plant. In new locations the educational plant may be constructed as the first unit of a new building group. The parish hall provides for the services of worship and the various rooms enable the church to conduct all the activities of a seven-day-a-week program.

In planning the educational unit it is suggested that the Elementary Department rooms, particularly the Nursery, Kindergarten, Primary rooms, with Primary classrooms, the offices, church parlor, and chapel be located on the main floor, adult classrooms, clubrooms, bowling alleys, game rooms, on the ground floor, and the church hall and additional department rooms on the second floor. Smaller churches may construct an addition providing a one-story hall with stage and kitchen and a two-story section with church-school rooms at one end of the hall.

CHAPTER XII

BUILDING FOR FELLOWSHIP

The leader of church building often finds that he must pause at several points in the program to inform and convince the local church board of the importance of certain phases of the seven-day-a-week ministry now properly expected of a Christian church. So while it may not lie within the province of a book on church building to consider the matter of program in detail, yet we must recognize that building and program are not to be separated. An architect may sometimes need to help a church appreciate its mission although he is justified in expecting that the church will present to him its program of requirements. If the architect is content to plan the church just as the Building Committee stipulates, he is likely to be criticized for having given the people an inadequate or unsuitable building.

Probably more questions are raised in church building committees in the matter of building for social and recreational life than about any other phase of the church's work. It will be well, therefore, for the leader of the building program to establish himself thoroughly regarding the need of adequate provision for the social and recreational life of the people. There are several excellent books on the subject, for example, *Recreational Leadership of Boys*, by William Ralph La Porte; *The Church at Play*, by Norman E. Richardson; *Education Through Play*, by H. S. Curtis; *Recreational Leadership for Church and Community*, by Warren T. Powell; *Recreation and the Church*, by H. W. Gates; *The Church and the People's Play*, by H. A. Atkinson.

Churches to-day are more generally recognizing that play, recreation, and social fellowship are vital to a well-

rounded religious experience. In the Methodist Episcopal Church it is expected that a director of recreational life be appointed by each local church. This is in simple recog-

CHURCH PARLOR, LUTHERAN CHURCH, EAST LIBERTY
PITTSBURGH, PENNSYLVANIA

nition of the fact that character is largely the sum of habits acquired in varied activities. Churches realize that they are not justified in sending youth—boys and girls—to other

agencies for needed recreational life any more than Jesus would send the crowds to the cities to buy bread when the means for ministering to their needs were at hand. "Do not send them away," "Give ye them to eat," might well be said to church committees that hesitate to provide educational, social and recreational activities. The church cannot with good conscience farm out its ministry of recre-

Fellowship Room, First Methodist Episcopal Church, Gary, Indiana

ational and social work to other organizations, although it should in many instances co-operate heartily with them. The church cannot neglect these activities, because they are vital to any program of religious education. The educational values in play are essential to complete Christian living.

The church is a permanent agency and often is the best organization to sustain such activities as the Boy Scouts of America, an extension group of the Y. M. C. A., etc. The church does this work with an underlying religious

motive and with the high purpose to build Christian character. If the church assigns this ministry to other agencies, it cannot expect the loyal response of those to whom it fails thus to minister.

Vital elements of individual and social Christian character —self-control, loyalty, helpfulness, cheerfulness, courage, obedience, respect for officials, courtesy to opponents, and trustworthiness—are developed and cultivated in play. The divisive and destructive elements of character—criticism, boasting, selfishness, chagrin, suspicion—cannot well live in the light of a fine social life.

A careful study should be made of the recreational needs that the church should meet. Study the matter of possible overlapping with the work of other agencies to determine whether their activities are so motivated and meet such needs as to justify the church in relinquishing certain services in the recreational or social field. A recreational, social and fellowship program in terms of the groups to be served, their numbers, ages, and needs and hours when these activities are needed, should be assembled. Then develop a plan to provide the required rooms, keeping in mind possible multiple use of some rooms.

This division of the building program will become a live topic in some local church boards. Someone will demand to know how these rooms will be provided. How will the activities be supervised? What about the added expense for upkeep? Churches in increasing number are solving these problems and with advantageous results for the most serious objectives of the church. The recreational and social program has been demonstrated to be a most potent evangelizing force as well as building up the church membership itself physically, mentally, and socially and making the church membership much more effective as a religious force in the community. Workers at denominational headquarters will have data collected from the experiences of churches in this field of service.

The Parish Hall

Every church requires a hall for entertainments, pageants, dramatics, missionary educational programs, musical work, and suppers. This hall should have a minimum floor space of 30x50 feet, unencumbered by pillars or posts and a minimum ceiling height of fourteen feet. This is for the

Parish Hall, Saint Paul's Methodist Episcopal Church
Niagara Falls, New York

smaller churches. Other churches should have a hall at least 40x60 feet in size with a clear ceiling height of 16 to 20 feet. These measurements are in addition to gallery or stage space. A hall of this size would seat 400 people in chairs allowing 6 square feet per sitting and would accommodate 240 at tables. Other churches require larger halls, but sometimes the parish hall is so large that smaller rooms which are of the highest importance are crowded

out. Under the stage of the hall storage space is provided for tables or chairs which are run on low trucks. The stage should be adequate in size. In order to determine the size required make careful comparative studies. Dressing rooms should be available. Perhaps the same rooms may sometimes be used as individual class rooms. If the stage may have a window at the rear it may also provide semi-separated class-room space. The kitchen may be located at the end opposite the stage or at the side as far as possible from the stage. Provide for closing the openings between the kitchen and the hall so that the noise of the work in the kitchen will not interfere with the speaking after banquets. If the hall is located on an upper floor, a high ceiling is possible under the roof construction. The hall will be more pleasing in every respect than is possible when it is located in a basement. The open roof construction can receive good architectural treatment. A high wood wainscoting will protect the side walls if the hall is used for gymnasium purposes. Provide for the best possible acoustics in the hall or gymnasium. Wire screens should be constructed to be hung in front of the windows. Construct basketball equipment so it can be removed. Storage space should be available for scenery, extra chairs, mats, screens, etc.

The Gymnasium

The church has passed beyond the experimental stage in gymnasium work. Through part time or full-time paid or volunteer leadership, by the use of Scout Directors and teachers of the various classes, competent supervision is available. The gymnasium, of course, should not be made available except when competent leadership is in charge. The emphasis in physical education to-day is not so much on equipment as upon leadership. With the proper program and leadership, the church will need to expend only moderate amounts for such equipment as basketball balls and nets, volley ball nets, a few mats, playground balls, and such articles. Wall equipment and mechanical devices

will not usually be required. A church gymnasium should not be treated too coldly from the architectural standpoint and yet it must be well and substantially constructed. If glazed brick or tile walls are used, a composition ceiling may be constructed to improve the acoustics. Ample spectators' space should be provided. Dressing rooms will

Volley Ball Game in Gymnasium, First Methodist Episcopal Church Oak Park, Illinois

be required and space provided for showers and lockers, although the church may not install these until the need has been demonstrated. Adequate space should be provided both for the shower outlets and dressing cubicles. In case of shower rooms for girls, dressing cubicles are essential. The room may be so planned that two or three cubicles are to be arranged for each shower opening.

The Kitchen

The good women who serve the church in the kitchen deserve the best possible equipment. They usually secure it. The architects should present a thoroughly studied layout indicating all of the equipment in place and planned so that an adequate but not an extravagant amount of

space will be required. A modern and efficiently planned kitchen will not require as much space as the typical old church kitchen, particularly when the waitresses do not enter the kitchen itself but are served from steam tables or counters.

Kitchenettes

Kitchenettes provided with gas or electric hot plates, cupboards and sinks for washing dishes, should be handy to the church parlors and some of the department rooms for use at smaller social affairs, children's parties, etc. They should be large enough for four to six or eight workers.

Boy Scouts, Girls' Clubs, Etc.

These organizations require rooms substantially finished where their meetings can be held and paraphernalia, trophies, etc., kept. The same rooms are available for classes during the church-school session.

Bowling Alleys

Bowling alleys have been found very popular. Some churches have difficulty in finding sufficient hours to schedule the alleys to the various classes and groups that wish them one or two hours per week. In some cases a small charge is made, one half of which goes to the pin boy, the other half for upkeep. The space required for two alleys is 83x11 feet, 5¼ inches, besides space for players' bench and for spectators, which should always be provided. The width required for three alleys is 17 feet, 5 inches.

The Corridors

Some of the larger churches use corridor space for group activities. This consideration helps secure adequate corridor space which is very important. Unfortunately, many building committees discount the importance of ample corridors and means of circulation through the building.

Church Parlors

The parlor is important, as it provides the friendly center of the church building. It should be attractively and comfortably furnished with fireplace, built-in book-cases, casement windows and window seats. The same room is available of course, for an organized church-school class. A kitchenette should adjoin the parlor. Plan to

YOUNG PEOPLE'S PARLOR, NORTH SHORE BAPTIST CHURCH
CHICAGO, ILLINOIS

have colored medallions in the windows, symbols, etc., to lead the occupants to recognize this room as a part of the church.

Visualization Equipment

A picture booth for moving picture machine and stereopticon must be considered when planning the parish hall or gymnasium. Several rooms should be equipped with shades so that they may be darkened during the day time.

Provide convenient storage space for the visualization equipment.

The Town and Country Church

The small church in many instances has excelled the city church in becoming a center in the social and recreational life of the people. It will be unfortunate if the rural church ever allows other institutions to eliminate it from this field of Christian endeavor. A church hall or parish hall, with a minimum clear floor space of 30x50 feet and a clear ceiling height of 14 feet, with stage and kitchen should be provided. In some cases a separate "community house" will be suggested. This proposal should be studied from every angle before a decision is reached. It may appear that a separate building should be constructed by the church and, if there is only one church in the community, this may be designated as a community house. It seems preferable, however, to construct this equipment as a wing or section of the church building itself. Then the activities will more likely be recognized as truly integral parts of the church program and ministry and troublesome problems of control and administration are not so likely to arise. The possibilities for serving the people will not, in most communities, be lessened. When constructed as a wing to the church the addition becomes more readily available for the purposes of religious education. Its usefulness is thus greatly enlarged.

CHAPTER XIII

ARCHITECTURAL DESIGN

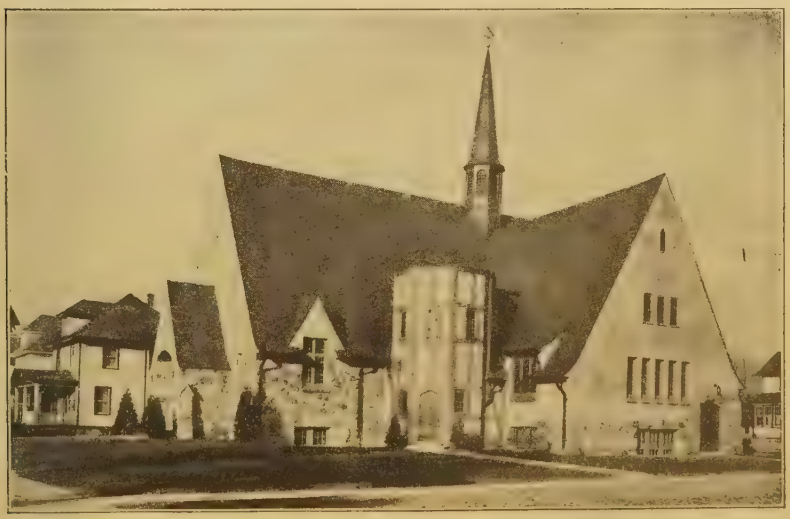
"ARCHITECTURE is the art which so disposes and adorns the edifices raised by man for whatever uses that the sight of them may contribute to his mental health, power and pleasure"—Ruskin.

CALVARY METHODIST EPISCOPAL CHURCH, NEW YORK CITY

The exterior design largely determines the message which the church will succeed in giving to great numbers of people. Many will not enter its portals unless, through its design, the church proclaims in pleasing tones a message of welcome and of promise. Before entering the

Trinity Church, Fort Wayne, Indiana
(Lutheran)

building itself the worshiper should become conscious of an atmosphere that stirs the devotional spirit. The first essential toward a pleasing design is a good plan. A logical plan with rooms, corridors, stairways, and entrances well arranged will lend itself to a gratifying design. The architects must be given considerable time if a satisfactory design is to be secured. Much depends upon properly adjusting the design to the site and surroundings. A church in a crowded section in the city must hold its own and be significant in spite of its surroundings. Very seldom can the design of one church be duplicated in a different location. Church design is a creative art, not merely a work of assembling parts. If a design is badly executed, it is bad architecture regardless of the style the architect has endeavored to use. To be intelligible in any language, one must have a good vocabulary, so in expressing oneself in Gothic, Romanesque or Georgian architecture, the designer must have a broad vocabulary in any of these



METHODIST EPISCOPAL CHURCH, FARMINGDALE, LONG ISLAND, NEW YORK
Example of distinctive suburban church architecture, combining interest and utility.

forms, then produce an expression meet for a given situation.

A good designer will distinguish between good style and mere fashion. The church should be designed for permanence. As long as the world stands, the soul of man will need the house of God. The wise designer will avoid tricks and fantasies that speak of passing fads, neither will he seem consciously to strive for style, thereby most likely failing to attain it. We do not wish to know that the designer coldly copied a style of the last half of some past century. We wish to discover that the language of architecture is in his soul and blood and that his design is a sincere expression for the situation.

A church builder may confront the opinion that it costs more to secure a pleasing result architecturally. Taste is not a matter of cost but of charm, of good proportion and fitness.

The materials of construction will, of course, definitely affect the design. The design must treat the materials honestly. We do not wish to see buttresses attached to a frame building, for a buttress belongs to masonry construction as do pointed arches.

The preferred material for church building is stone. In many parts of the country a good ledge stone can be found and utilized with pleasing results. The necessary engineering tests should, of course, be made in order to discover its lasting and weight-bearing qualities. Cobblestones or round field stones are not advisable. They lack the unity and coherency that should obtain in a wall. Excellent architectural work can be done in brick, but especially fancy brick and colored mortar should be avoided.

To-day we are coming to realize the added pleasure given by a stone wall or roof when there is a variation of color and tone. An architect who was using a fine rust-colored stone to give life and tone to his wall was compelled by the building committee to remove this so that every stone would match; the result, of course, is a cold,

Lutheran Church, East Liberty, Pittsburgh, Pennsylvania

deadly, gray monotony. In another case the opposite extreme was reached. A light-colored brick that did not blend well was spotted over the wall in cold mechanical arrangements, giving a very unpleasing result. We must have variation and interest, but this should not seem forced and strained. We should avoid tricks to simulate

UNITED CONGREGATIONAL CHURCH, BRIDGEPORT, CONNECTICUT
This city church built in 1926 illustrates modern adaptation of the American Colonial.

age or to effect any unnatural result. A heavy material must not seem to be supported by lighter material.

The spirit and dominating motives of the design should obtain throughout the building. The parish hall is still the church in its larger relations and the spirit of the church should pervade this and every part of the building. We should avoid an effect of coziness. The church is not a sitting room. We do not go to church to seek physical

comfort but to have our souls stirred by the Divine Presence. Some folks who crave comfort need something entirely the opposite for the good of their souls.

A church of good architecture, whether small or large, seems to assume a personal quality and one will return to it again and again, and each time will be impressed by some new note of its architectural character.

CHRIST LUTHERAN CHURCH, HAZLETON
PENNSYLVANIA

Lutheran Church, East Liberty, Pittsburgh, Pennsylvania

CHAPTER XIV

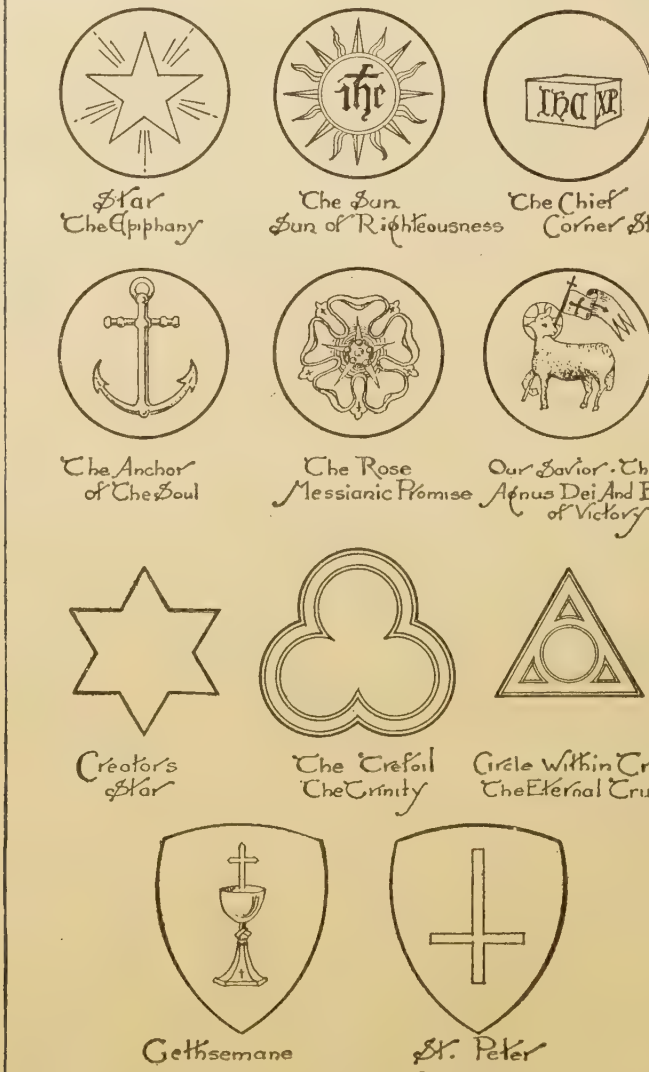
INTERIOR FINISH—DECORATION—SYMBOLS—EQUIPMENT

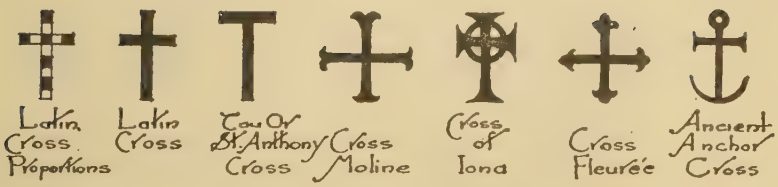
The unconscious but constant impression made by the interior color scheme and decorations is a force for personal community culture that cannot be overlooked. Lack of color harmony affects some sensitive souls just as a musical discord offends the trained ear. One may not analyze the cause or effect but simply knows that he is uncomfortable and unattracted in an ugly church building. Colors that are too somber, clashing, or gaudy, amateur artistic attempts, and painted sentimental mottoes are handicaps to spiritual culture.

There are many varieties of patent wall materials on the market. Some of these materials enable the architect to secure pleasing effects, but gaudy work and imitative material should be avoided. One is sometimes shocked when tapping a wall which affects a marble appearance to find that it is really only cardboard. When considering wall and ceiling materials, inquire as to their sound absorbing qualities. Further notice regarding color schemes in church-school rooms is given on page 132.

The Use of Symbolism

We have space simply to call attention to the fascinating and important subject of symbolism. The use of symbolism is nearly universal. The flag is a symbol. Railways are run by symbols. We are having a revival of interest in symbolism in Protestant churches and with thoroughly good reason. F. R. Webber has rendered a great service to the modern church in his new book *Church Symbolism.*


Star
The Epiphany
The Sun
Sun of Righteousness
IHC XP
The Chief
Corner Stone
The Anchor
of The Soul
The Rose
Messianic Promise
Our Savior. The
Agnus Dei And Banner
of Victory
Creator's
Star
The Trefoil
The Trinity
Circle Within Triangle
The Eternal Trinity
Gethsemane
St. Peter
Some Ancient Symbols



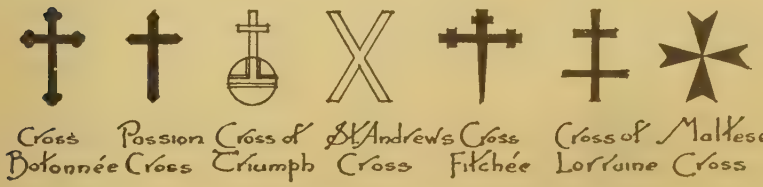
Various Designs of the Cross

Every religious truth has greater meaning than that expressed in words. Religion points toward the universal truth. Words often handicap rather than increase thought. A symbol indicates and points toward greater truth, leaving the mind free to pursue its course. Every excellency has its danger, so a symbol must be used as a symbol, as a sign and a stimulus to the thought and imagination but not as a fetish; neither should symbols or ornaments be misplaced or used inappropriately.

Lighting

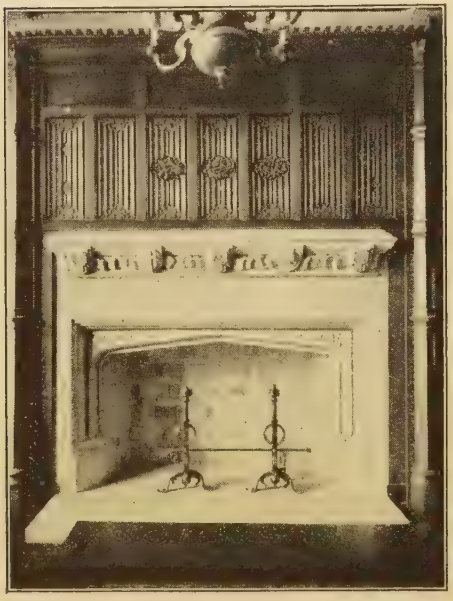
This and every other part of the building and equipment must receive study by the architect and not be left to the untrained handling of the local equipment man. It is quite important to have the lighting fixtures made in designs appropriate to the architecture. First develop a plan, then let the lighting contractor offer estimates based on definite specifications. Study carefully convenient locations for switches, floor outlets, lights in closets, outlets in the organ chamber and for the stereopticon and electric cleaner in several rooms, etc.

Fortunately, electricity, which is by far the best form of



Various Designs of the Cross

lighting, is now generally available either from company lines or by the use of an individual plant. Indirect lighting is not as popular as formerly. There is now on the market an excellent variety of drop fixtures that diffuse the light equally and where needed. Avoid unshielded bulbs, circles of lights on the chancel or on the ceiling and all fantastic and tawdry arrangements.



Fireplace in Young People's Room

Heating

The heating equipment should be planned and controlled by the architect. Local conditions must be taken into account. Estimates and proposed contracts to meet the architect's specifications will be offered by reliable firms. There have been great improvements in heating and ventilating facilities for small buildings. Modern public-school construction has encouraged this. Have these matters studied and planned by competent persons. With thorough planning and with all of the excellent equipment available almost everywhere, mistakes should be unnecessary. Before employing the architect inquire how he manages the heating and mechanical problems.

Ventilation

In some States the building code definitely specifies the requirements for proper ventilating. Most architects are

well informed regarding this very important item. It remains for the leader to investigate and approve a proposed arrangement. Proper ventilation and well-placed electric fans add much to the comfort and popularity of the building.

Other Equipment

See that the requirements for cleaning equipment, acousticon, sanitary facilities, and drinking fountains at con-

Methodist Episcopal Church, Belle Plaine, Iowa

venient locations and of proper heights, and the various conveniences as they may be desirable and possible are fully noted on the check list and construction program. When acousticons are used do not group all the instruments in front pews.

Church Vault

A fireproof vault for storage of valuables and records can usually be constructed at a reasonable cost if provided in the original plans.

CHAPTER XV

THE ACOUSTIC DESIGN OF CHURCHES

The use of steel and other nonabsorbent materials in the construction of large auditoriums has made the problem of acoustics an urgent one, but this highly important matter need not be left to chance. Scientific study of the subject is of comparatively recent development, with the result that many architects have not been successful in this phase of their already complicated task, but commercial companies have made active progress in acoustic adjustment and have developed various products with a greater or less degree of merit. Among the scientists who have been dealing with the problem, Professor F. W. Watson of the University of Illinois has rendered valuable service.

The leader in church building must be in a position to know whether or not the problem of acoustics has been properly handled. However, no one would wish to guarantee successful acoustics in a room, for much would depend upon the quality of effectiveness of the original sounds. Sometimes it is suggested that wires be strung across the rooms that have bad acoustics. This would have about the same effect as wires across a stream would have upon the flow of the water. Sound from a speaker or musical instrument travels out in waves, with great velocity. As a result it is rapidly reflected back and forth between the walls. This causes overlapping of sounds and perhaps confusion. If a speaker stands close to a reflecting surface behind him, the reflection is almost simultaneous and re-enforces the sound, but if the reflecting wall is more than twenty-five feet from the speaker, confusion is likely to result. A curved wall or ceiling produces a focusing effect

and increases the likelihood of trouble. A curved sounding-board above the speaker's head is bad. A Gothic ceiling is better for acoustical purposes, and sound-absorbent material is more effective on its surface than on a flat ceiling. If walls and ceiling are made of hard sound-reflecting materials, little of the sound is absorbed and overlapping of the reflection results. For good acoustics, the sound that we wish to hear should reach us with suitable intensity and distinctness, then die out and leave the field clear for the arrival of the next sound. An average sound should die out in two seconds or less.

When an auditorium is filled with a large audience, particularly when heavy clothing is worn, much of the sound is absorbed and the acoustics are greatly improved. But the room itself should be so designed as to avoid defective acoustics, for speakers are entitled to the confidence which comes with the knowledge that the room is correct for speaking purposes. It is just as important to have correct acoustics for organ recitals and musicals. The amount of sound-absorbent material to be installed for good effect should be determined by careful calculation. Too great an absorption of sound will not be satisfactory, particularly for musical purposes, since the room will have a dead or lifeless effect. Sound-absorbent materials should be placed upon reflecting walls, particularly those at a distance from the speaker, and the walls about the speaker left reverberant. An auditorium of rectangular shape is preferable for good acoustics, provided the sound comes from a narrow side.

Churches with unsatisfactory acoustics should immediately take steps to have this handicapping situation remedied. The commercial concerns dealing with the problem will be glad to send engineers to make recommendations, which are likely to be in the nature of increasing the proportion of the sound-absorbent surfaces in the room. In badly designed auditoriums, however, particularly those shaped like a clam shell, the problem will be

very difficult. Smaller churches may improve the acoustics by the use of heavy hangings at windows and doors, and especially at the rear of the room.

Saint Paul's Evangelical Lutheran Church
Massillon, Ohio

CHAPTER XVI

THE ORGAN

The church organ has a most interesting history. The crude water organs of the Romans were used at the gladiatorial games, which prejudiced the early church against their use in religious services. It has been stated that the organ came into Christian use in 666, but they were used in Spain as early as 450. Charlemagne, upon the recognition of the need of musical accompaniment for singers, purchased a rather primitive organ in Italy in 757 and placed it in the Cathedral at Aix-la-Chapelle. Organs were in common use in England in the middle of the tenth century. One in Winchester, used by the Benedictine monks, had four hundred pipes and required seventy men to work the twenty-six bellows. The use of organs developed irregularly until the seventeenth century. Organ cases became important architectural features in the fifteenth century. A notable one was built in Amiens in 1422 to 1427. In the fifteenth century the organ in Nuremburg had 1,554 pipes. Exeter Cathedral in the seventeenth century had an instrument with a double diapason three feet in diameter and twenty feet long. During the madness rampant in the Civil War (1642–46) most of the organs in England were destroyed. Meanwhile, German and French builders made good progress, and many of these became famous in England after the fall of Cromwell. Organ smashing was an unfortunate adjunct to Reformation in many places. In 1527 a great organ was destroyed in Zurich. In 1566 a crowd entered the great cathedral in Antwerp in the dark and utterly destroyed the organ.

The rise of wonderful congregational singing in Ger-

many, with a tremendous volume of tone, required the support and leadership of great organs. Silberman and Bach collaborated in producing important refinements in the German organs.

Cavaille-Coll (1811–1899), a distinguished French builder, made great improvements, and built seven hundred organs. His work is still intact in such notable churches as Notre Dame in Paris and Saint Ouen in Rouen. His work gave great impetus to the development of church music.

Willis of England, who built sixteen cathedral organs, ushered in the era of modern organ building. In 1859 he began the great organ in Saint Georges Hall, Liverpool, to-day one of the finest in the world. His grandson recently rebuilt and electrified his masterpiece in Saint Paul's Cathedral. The present electric action console that gives the modern organ either a wonderful range of power or limitless jazziness, is the result of the work of a Frenchman—Peschard—and an Englishman—Hope Jones. With unlimited possibilities and resources, organ building in America is still in the adolescent stage. The tremendous demand for pipe organs has created a place for organs, organ architects, and players of all sorts. The man who plays jazz in the theater all the week may undertake to play the organ in the house of God on Sunday and perhaps bring some of his sentimental tawdry stuff with him. This may be possible until the people generally develop a keener appreciation of real church music. Until then cheap organ builders will load the organ with "ear-tickler" attachments and use the same glaring colors that are sold to motion picture houses.

The wise method of handling the organ problem is to employ an expert adviser or organ architect. Certainly, this should be done if an organ of any size is to be installed, taking care, however, to secure one who is above suspicion of granting the contract to the firm that may pay him a commission, or state the lowest price, providing therefor the poorest quality. If such a church organ architect is

not employed, it is well to go to a reliable builder who is sympathetic with the highest ideals of church organ work and have him prepare organ specifications thorough in every respect to be submitted to competent organ builders for bids. The architect of the building must, of course, control the design of the case and visible parts. Some architects can handle the whole organ problem. An organ expert will know how to practice economies when necessary so that the greatest possible range of notes may be secured for the amount appropriated. This is sometimes done by omitting certain parts of some of the stops. The organ specification writer will know how to work out the most advantageous schedule.

The principal purpose of a church organ is to furnish an accompaniment for the singers. Admittedly, the organ recital renders an invaluable ministry but its purpose is mainly to inspire devotion and personal worship and not to give an exhibition of all the tricky arrangements possible in a modern organ. Such performances should be left to the moving picture theaters. Truly churchly principles should enter into the purchase of an organ, as it is to be used to influence thousands of lives during a period of from twenty-five to forty years. As an orchestra composed of twenty good musicians is superior to one with forty mediocre musicians, so an organ of high quality is better than one of larger size but of poor quality, and with many parts that may seldom be used.

It seems possible in recent years, in some cases at least, to secure almost any required amount for an organ. It is easier to raise money for an organ than for equipment for religious education. Sometimes it may be well to use a part of the money for a permanent endowment for the maintenance of the organ.

The Organ Chamber

Secure sufficient floor space so that the pipes will not be too closely crowded, thereby muffling each other and

being difficult to reach for tuning. See that the architect provides a sufficient area and height for any organ that might possibly be installed in the building. The only satisfactory method of caring for this need is to have the architect indicate to a competent organ builder the space he suggests for the organ and learn whether sufficiently liberal space, height, and tone openings are provided. This should be done very early in the preliminary planning.

Have no windows or radiators in the chamber. It should be well ventilated with air of the same temperature as the rest of the room. The floor must bear the weight of the heavy metal parts without the slightest settlement. Install electric plugs for tuner's lights. Have the walls of soundproof construction. Cement plaster is recommended for the inside finish of the walls in order to reflect the sound. Have the blower chamber soundproof with clean, fresh air available. The organ blower should receive air of the same temperature as the auditorium. A very considerable amount of air is delivered to the auditorium through the organ, hence the vital importance that it be not stale or musty.

Location of the Organ

There is now a general agreement that the organ has no proper place in the chancel, where it was allowed to intrude in the days of America's youthful enthusiasm over being able to afford some new thing (though sometimes a donor stipulates that the whole instrument be in view). Highly colored or gilded dummy pipes, extending like a great stockade across the front of the sanctuary, are most objectionable in American church architecture, and ugly grille work directly in front of the worshiper is almost as bad. No instrument required as an aid in worship, even so marvelous an instrument as a church organ, should be intruded between the worshiper and the principal focal place in the chancel. This should be stated with all possible emphasis. The preferred location for the organ chamber to-day seems

to be at the side of the chancel, opening into the chancel for practically its entire length, with the pipes showing into the chancel and a few showing into the nave. The organ then speaks directly into both the chancel and the nave. This is the location of the organ in the new Liverpool Cathedral. Let the pipes be in their natural colors. Such portions of the organ as are visible should be dressed by wooden case work which may be made an attractive architectural feature. The great architect Goodhue insisted that every pipe in the case be a speaking pipe and that no dummies be used.

The Console should be located so that the minister and choir leader may be readily seen. Of course it should not be any more prominent as related to the congregation than absolutely necessary. Its interior must be easily reachable for repair work. Sufficient space must be provided the bench so that it may be pushed back to accommodate a tall organist.

The wind supply—see that the blower is of the best make. The Spencer "orgoblo" is recommended.

The wind chest—the "Pitman" chest is recommended.

The electric system The electrical contacts should be either of phosphor-bronze or silver, preferably silver.

Organ pipes—There are two classes—reeds and flues. These, particularly the reeds, are to be tuned with great care by an expert, who in building the organ thinks of the instrument as a whole. Unfortunately, some organ makers in America buy their pipes from stock pipe makers and have them voiced by trade workers.

"Through long drawn aisle and fretted vault
The pealing anthem swells the note of praise."

CHAPTER XVII

GLASS

Window glass is of such importance in giving character to a building, so strongly determines its spirit and atmosphere, and has been so often a source of error that it demands very special consideration by every leader in church building. Dr. Ralph Adams Cram speaks of a "bar-room" school of decoration that ran riot in our decoration and glass work during the past forty years. In nothing else is bad taste so glaring and objectionable as in glass.

The window is primarily for the purpose of admitting light and not for the display of pictures. When this primary purpose is departed from errors are sure to develop. Stained glass is decorative work and must be limited to this category or it fails. The stained-glass maker who executes a marvelously colored picture fails to perform his real duty. It is not his function to rival the artist who uses canvas for his medium. It is not his province to display great paintings but to execute a translucent decoration that continues the flat surface of a wall. We know that the glass is thin and flat, and should not deceive ourselves by assuming that we may have in the window a reproduction of landscapes—sheep with steel rods across their eyes, and the pictures stretching across the structural divisions of the window! Perspective is out of place in window glass.

The inspiring support given by religion to art is gloriously demonstrated in the history of stained glass. The church was the one patron of consequence of this great art. Here, indeed, art has inspired the worshiper, stimulated the highest spiritual energies, provided a means of expressing the highest values of the personality, and added to the joy of human existence. The effect of good glass may be

likened to music. The luminous spaces, vibrant with color and light, play upon the consciousness of the soul, helping to bring it into harmony with the eternal source of joy and light. With this possibility, how crude it seems to fill these spaces with anything that clashes with the most religious feeling! Stained glass belongs essentially to Gothic architecture. The glory of ancient glass belongs to the thirteenth century. Some of the oldest, rarest, and most beautiful glass was destroyed at Rheims during the madness of 1914–18. Early Gothic glass may be seen in France in Chartres, Le Mans, Bourges, Saint Chapelle in Paris and in Canterbury, Salisbury, Lincoln, and York in England. Very old glass becomes pitted and otherwise affected by the weather and climate so that it takes on an interest and beauty that age alone can give. The vandalism which destroyed so much wonderful old glass robbed the following generations, and in many instances brought lamenting where prayers might have arisen.

The introduction of stained glass into America came at an unfortunate time. It did not seem suitable to colonial architecture. With the Gothic revival in England (about 1820–) came a better understanding there of the use of glass. Some excellent English glass reached America; for example, the Jesse window in Trinity Church of Boston (1877). But, in the main, a riot of ugliness and

CHRISTIAN FELLOWSHIP WINDOW, FRANKLIN STREET PRESBYTERIAN CHURCH, BALTIMORE, MARYLAND

"The Training of the Twelve." Given in commemoration of the twenty-fifth anniversary of the ministry of Harris Elliott Kirk. Designed by Charles J. Connick, Boston, Massachusetts.

total misapprehension of the purposes and ideals of glass predominated. In our ignorance we all but bowed down and worshiped the flaming picturesque windows and loudly did churches boast of their "art" windows. The less (?) fortunate churches had to use a milk-and-water opalescent atrocity.

A picture may not always suit one's mood, but if it is in a window, it demands attention. A window of formal work or of mosaic or antique design, if beautifully colored, allows one to make his own pictures, allows the music to play with his soul. The leading we know is necessary, and it need not be hidden or disguised. Scenery may be merely suggested, not fully depicted.

Chancel Window, Broadway Methodist Episcopal Church, Indianapolis, Indiana

While there are many reasons for encouragement, evil work is still with us. Transparent pictures rather than windows as honest architectural units; such disregard of structural honesty sometimes, that window tracery is ignorantly cut off in order that the picture may fill the space regardless of how the upper portions of the tracery are to be supported. The window design must not ignore the mullions.

Some churches allow themselves to be guided too much by the wishes of a donor, though if tactfully dealt with he will usually be glad to have his gift conform to the standard set by the architecture of the building.

Otto Heinecke was a pioneer in recovering the lost ideals of the art. The late H. W. Young pointed a better way in the House of Hope Presbyterian Church, Saint Paul, Minnesota, remarkable for the silvery tones of its grisaille glass; Saint Bartholomew's Protestant Episcopal Church, New York; Saint Stephen's, Colorado Springs, and elsewhere.

Willet of Philadelphia did much to oppose the opalescent craze. His work in Calvary Protestant Episcopal Church, Pittsburgh; the Graduate College at Princeton and the West Point Chapel reaches a high plane. D'Ascenzo of Philadelphia in the Valley Forge Chapel and elsewhere, Connick of Boston and several others have demonstrated the wonderful ability we now have in America, hardly excelled in modern Europe. None of our churches now need to make themselves ridiculous in the use of glass unless they so insist.

Selecting Stained Glass

Remember first of all that glass is a vital part of the architecture of the building and the architect's guidance should be sought. The glass manufacturers should be selected just as the church should select the architect and not on the basis of cleverly displayed pictures. Any manufacturer can employ an artist to make attractive pictures just as any architect can hire an artist to display a pleasing picture of a proposed new building. Beware also of the extravagant pronouncements about glass appearing in the catalogues of some manufacturers.

It is not often that a church is financially able to install all of the stained glass required when the building is constructed. The church is fortunate if at the time of constructing the building, it can install the chancel window and one or two others to set the standard for the future glass.

A program should be laid out for the glass, the whole having proper sequence, unity, and comprehensiveness.

This will guard against individual donations of windows out of keeping with the plan. The type of glass should be determined, and the general program of subjects to be depicted. Then as many windows as possible may be installed, the balance of the openings being filled in with a good quality of leaded cathedral glass, to be replaced with windows in keeping with the program adopted, as the church is able to purchase them.

Grace Lutheran Church, Cleveland, Ohio

Landscape Treatment of a Suburban Church
First Baptist, Plainfield, New Jersey

CHAPTER XVIII

THE CHURCH LOCATION AND GROUNDS

A NEW church location should be selected with regard to its accessibility and its relation to the constituency it is proposed to serve. Means of transportation, the approaches available, parking space, contour of the surface, the probable future uses of adjoining properties, fire hazards and nuisances all affect the eligibility of a site. In smaller cities and towns a central location is desirable. It should be easily accessible from the places the people are accustomed to visit on business and other errands. The location should benefit by the junction of important streets. Because of the importance of the week-day program of religious education a site near the public school is valuable and also because of the silent influences of good church architecture upon the youth. In selecting a site remember that the building must be accessible not only to those who attend public worship but also to those who should be reached by its various activities during the week. In residential sections the trend of the city's growth must be studied as well as the locations of other churches and their ability to meet the needs of the community.

It is well to have an architect or a Church Bureau of Architecture prepare preliminary plans indicating the possibilities of a proposed site, including provision for future extension of the building, when all the restrictions, sidewalks, or zoning requirements are considered.

In recent years many churches have greatly enlarged their ministry by moving to new locations and constructing new plants, or in some places only the educational unit of a new building. Many churches for a sentimental or other unwise reason have persistently remained in poor

locations with inadequate equipment, consequently with constantly decreasing effectiveness.

Churches in villages and rural sections, and wherever possible in towns and cities, should secure large plots, making attractive landscaping possible and providing space for play grounds, outdoor services, pageants, etc. We question the wisdom of a religious organization begging from city authorities concessions as to proper setback requirements, etc. It is better to buy additional property than to lose the respect of the community.

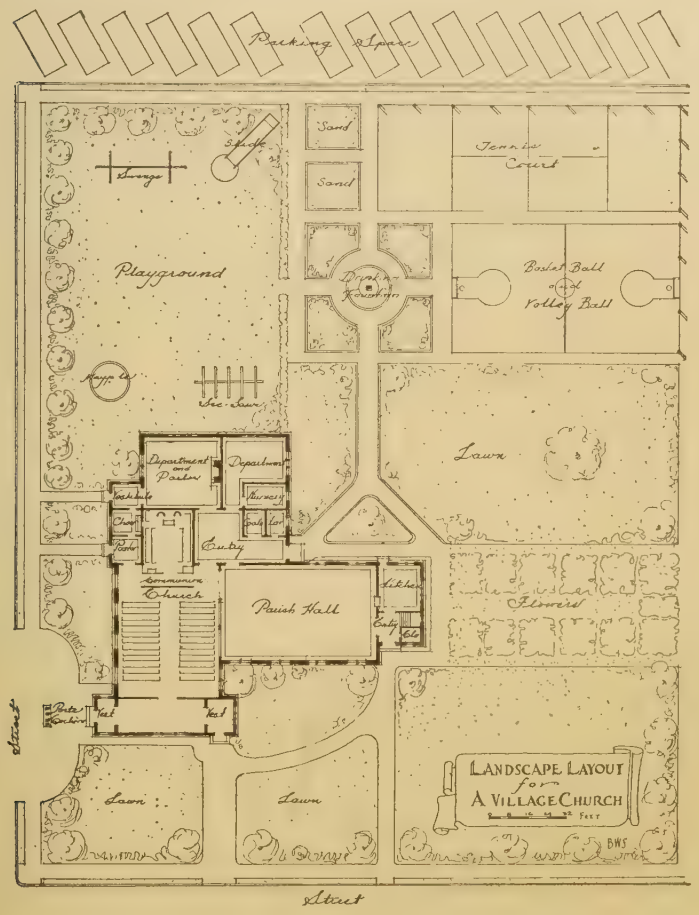
The competent architect will study the site and its approaches with a view to the best possible placement of the building. The sanctuary should be placed so that it will not be necessary to scale a flight of steps to reach it. It may be put on the highest level of the plot, if the ground slopes. It can then maintain a dominating position as compared with the church-school portion of the plant even though that may be two or three stories in height.

Improving the Grounds

The church buildings and grounds compose a symbol of the devotion of the people to the religion represented. If the church is the most important institution in the community, then the property should receive the most faithful care. Two or three years ago a writer claimed that in a certain county one half of the church yards looked like goat pastures and in no case was the property kept as well as the public-school properties. Trees and ornamental shrubs well placed greatly enhance the attractiveness of a property and testify to the devotion and self-respect of the community. Outdoor beautifying is of such high value to the entire community that the church does well to lead in such an enterprise. The National Plant, Flower and Fruit Guild, 70 Fifth Avenue, New York City, issues an excellent sixteen-page booklet (price, 25 cents), which offers valuable practical suggestions for improving

church grounds, particularly in country and village, and tells how to form a Church Garden Club.

The first thing to do in improving the property is to



LANDSCAPE LAYOUT FOR A VILLAGE CHURCH

prepare a survey showing existing conditions. Upon this mark the ideas for improvement, then prepare a definite plan of improvement drawn to scale. The accompanying

cut is offered for suggestive purposes. Each property will require individual treatment. Walks and drives should receive careful consideration. Avoid stiffness and formality in treatment. Nature does not follow straight lines. Flower gardens should be planted to provide cut flowers for the sick and for the various rooms in the church building. Clumps of shrubbery help to neutralize the stiffness of the building lines and corners. Excellent results have been secured by the use of native trees and shrubs, such as cedar and other evergreens, dogwood, spicebush and many other varieties. One village church made a survey and within a mile found forty varieties of shrubs used by landscape architects. They then made a plan and in one day with volunteer workers transformed the grounds. It was a good form of social activity and an admirable way to express love for the church and the community.

A "Garden of Memory" composed of memorial shrubs, roses or evergreen trees is one of the suggestions of the National Guild.

Trees should be planted if the grounds are sufficiently large. They make a fine background, but should not be placed directly in front of the building. A living Christmas tree in the churchyard and smaller living evergreens for use indoors at Christmas time, are provided by some churches. Colleges of agriculture are sometimes able to furnish lists of suggestions and desirable plants. Local nurseries, of course, are willing to offer proposed schemes of landscaping.

CHAPTER XIX

THE HOUSE OF GOD IN TOWN AND COUNTRY

The country church in endeavoring to render the needed ministry of religious education, service and vitalized worship has found itself handicapped by buildings that were erected with devotion and sacrifice but *for a day that has gone.* The public school with its modern buildings of many pleasant rooms has too often left the church far behind in the march of human progress. Unwise plans of remodeling, such as digging out a basement under the old church building, have failed to meet the requirements and left the people discouraged.

Improvements in rural life in recent years have produced a changed attitude; isolation has been reduced or annihilated, standards of living have advanced enormously. This improvement must be capitalized for better church life, but it cannot be done if the church is content to continue its work in a type of building that was deemed adequate in the time of the oxcart and the sickle. In many communities the church equipment has not materially improved in two hundred years. In some places the children go from a fine schoolhouse to a damp, dark cellar for the divine ministry of religious education. All of our young people in the country can now see attractive school buildings, libraries, and moving picture theaters. They soon realize that if religion is the most beautiful thing in life, the church and all that symbolizes religion in the community should be beautiful and inviting. To secure this effect an architect of devotion, intelligence, and skill must design the interior and exterior of the building. Then with the grounds

attractively planted, the whole effect will give the religious forces a position of respect and appeal.

The parish churches of England are a distinctive contribution in human history; the village churches occupy just as eminent a place as the great cathedrals. The buildings themselves in the English parishes are inseparably identified with the progress of great movements. This should encourage all who are devoted to building the church in the small communities.[1]

Second Congregational Church, Winchester, Massachusetts

The rural churches in America are in sad contrast. Over there the smallest chapel has architectural character and interest. Here, sometimes the church is the most unattractive structure in the community. Now that the pioneer days are past, we should build the country church in keeping with the general progress.

[1] See *Some Famous Country Parishes*, by Ezra Squier Tipple.

Promoting the Enterprise

The literature on the rural church program and leadership is excellent and extensive. The church builder should draw upon this for his program building. Such books as: *Tested Methods in Country Churches*, by E. deS. Brunner; *Our Templed Hills*, by Ralph A. Felton; *Rural Social Organization*, by E. L. Earp; *Steeples Among the Hills*, by Arthur Wentworth Hewitt, are samples.

The work of promoting the building program in town and country is essentially the same as in the larger communities. The pastor may have to look after many of the details. This he should do gladly, for building the church is God's own work. In the country a greater proportion of people are likely to be able to render actual service in constructing the building, transporting materials, etc., if the pastor gives attention to the work of management. But first of all there must be a definite, wisely planned campaign of promotion. This will probably be well under way before the people suspect it. They will be led to demand that a new church building enterprise be undertaken. The church-school workers will be

Orchard Park Methodist Episcopal Church and Parsonage, El Paso Texas

given courses in training which will help them realize the importance of new equipment.

A survey of the conditions and a clearly defined program of the requirements, with illustrations of the possibilities of enriched community and personal life through a new building, will help the people to respond to the need.

The mission of the rural church is that of its Founder, to reach all of the people for God through teaching, divine and human fellowship, and service. The church building itself is the center and evidence of this divine-human mission.

The building program has often provided a stimulus to greater general activity on the part of the church. Of course the leader must have a clearly defined program of activities and definite reasons for having a new or larger building, but the building program itself will stimulate the people to broaden their church work.

It will be a fruitful means of discovering and developing leadership. The new building will make possible the various educational, social, and recreational activities which are so important in the development of leadership. It is commonly agreed that the great need in rural life is leadership.

Exalt the Building Itself

Build such a church as will guarantee that the youth going from the community to the ends of the earth will carry with them an impression of reverence, love for the noble and beautiful, and memories of fine Christian fellowship.

Relation to Other Agencies

In studying the needs, recognition must be given to the agencies in the community, such for example as the high-school gymnasium program or the county Y. M. C. A. A very thorough and definite study of the other agencies should be made with a question as to the degree in which

they are meeting certain functions of the church and with a view to the fullest possible co-operation. In writing the building program it will be agreed that the parish hall will be needed by the church even if a gymnasium program is not required. Entertainments, lectures, pageants, musicals, and suppers will make the hall a busy place. These activities are vital to the total church program and cannot be conducted by the church as successfully nor as purposefully in separated halls.

The Importance of the Building in Rural Home Mission Endeavor

The rural field includes many special types of work, each requiring a specially designed building. In a mining camp, occupied by foreigners, perhaps the need is for a settlement house with provisions for a varied ministry. In the southern mountains, a plant may be required providing under one roof a chapel, a dormitory, teacher's residence, school, and clinic. In his book *Our Templed Hills*, Professor Ralph Felton describes a most effective program made possible in a new building in an industrial town of 2,100 people. We quote a few items from a list of twenty-five activities conducted in a community house together with a total attendance for each activity for four consecutive months:

Story hour,	1,783	Games and gymnasium,	4,286
Rehearsals,	1,750	Willing Workers,	333
Library attendance,	4,564	Girl Scouts,	1,339

Financing the Rural Church Building Enterprise

As indicated in Chapter VII the financial support of a church building enterprise must be based on earnest religious motives and a campaign of education.

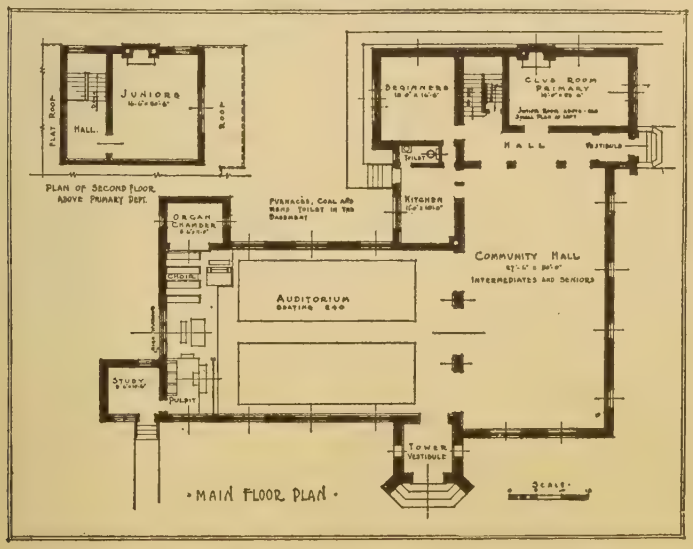
The inexperienced leader will find an abundance of practical suggestions in the many books on the rural church program and ministry. But in each instance a survey of

the requirements and of the possibilities for enlarged service directly applicable to the local situation must be assembled. The appeal to the people must be direct, enthusiastic, sincere, and persistent. Many a country church program has failed because the leader was not patient enough or big enough to plan a program of ministry extending over a period of years, which is necessary where generations of inertia burden the church and community life. E. deS. Brunner, in his book *Tested Methods in Town and Country Churches*, describes a campaign where the following questions were displayed: "What would the community be without the church?" "What would your wife and children do without it?" "What would your property be worth without it?" This is followed up by a list of the services rendered (in addition to the more definitely religious and educational activities): "The church building available for public meetings; dining room at the disposal of the community; quarters for the public library and reading room; a beautiful church building and grounds an asset to the community; provision for wholesome play for youth, etc."; then the question, "Would you want to be without it?"

Solicitors must be carefully selected and coached, and their assignments wisely directed. A subscription should be solicited from every member of the family. If some cannot subscribe in cash, they may give what they have or can produce, the income from one acre or a percentage of the year's crops, etc. One successful Negro church building enterprise was financed by the congregation renting and cultivating forty acres of cotton. Boys have given money earned in their corn or calf club work as their contribution to the church house. The church that sincerely ministers to all the people can appeal to the community at large.

Usually a debt must be expected as a part of the enterprise, but it should be limited to such an amount as can be immediately funded. The new building or additions may be so planned that certain units may be built and financed, leaving other units to be undertaken when the

first units have been safely financed. A budget covering all the essential items involved in the new building enterprise or in that unit of the program that is about to be undertaken should be prepared in advance. The budget ought to be studied so that it will be possible to build the units as planned within the amount authorized. If necessary, some items can be postponed in the interest of securing the rooms required, properly heated, and constructed in good taste and of first-class materials. Then, if necessary, old pews or furniture can be used temporarily, which would be a great deal better than doing without the new building. Careful and thorough planning with competent counsel



SUGGESTED FLOOR PLAN FOR TOWN OR VILLAGE CHURCH

should eliminate such church debts as prove to be detrimental to the essential work of the congregation.

Worship

A new church building with the several rooms required will make possible the reservation of the auditorium for

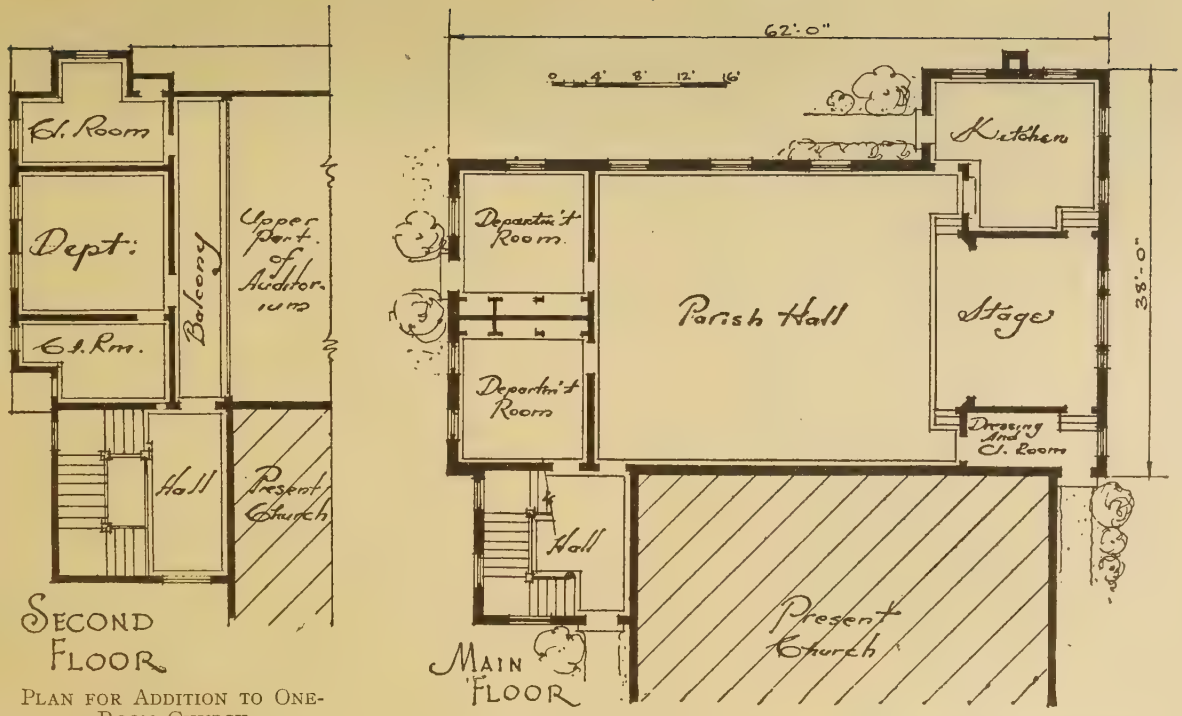
worship, or at least the limitation of its use to meetings that do not detract from the atmosphere of worship. The country church needs to emphasize worship. This is one field in which the church has no competition and in a broad program of activities the various services for divine worship must not be submerged. This means that a room must be designed with a view to the needs of the various types of worship, holy communion, vesper services, silent or private worship, as well as the principal worship services.

Religious Education

The child in the country has a divine right to an efficiently managed ministry of religious education. The public school has recognized the requirements and provided the facilities. Church-school departments of from twelve to fifteen pupils have been conducted successfully where separate rooms have been provided. A study of some of the plans illustrated will indicate how these have been planned. The public-school teacher will be more likely to serve in the church school when the church recognizes the primary educational requirements and makes some effort to provide department and classrooms.

Building for Fellowship and Recreation

The church building may well become the center for such organizations in the community as Boy Scouts, County Y. M. C. A. groups, clubs, etc. Most people will immediately recognize the vital importance of having a religious contact and foundation for all character-building activities. This is an aid to continuous and devout leadership and gives an aspect of permanence to the program. Every town and village church needs a parish or fellowship hall with unobstructed floor space of thirty feet by fifty feet, with a minimum clear ceiling height of fourteen feet. At one end of this hall, and exclusive of the fifty-foot length, there should be a platform with dressing rooms; at the



PLAN FOR ADDITION TO ONE-ROOM CHURCH

This will be found a very practicable plan. May be adjusted as to size to meet local requirement. The parish hall has a high ceiling and is unencumbered by posts. A departmentalized Church school is provided for.

other end or at the side, but as distant as possible from the platform, the kitchen equipment. In addition to this church or fellowship hall there should be two or three smaller rooms to provide a church parlor and meeting places for smaller groups. All of this equipment, of course, is available for religious educational work. For this reason, as well as to give the entire program a religious atmosphere, it is generally advised that the parish hall and other such rooms be constructed as a part of the complete church plant. This would seem quite practicable when the church itself is committed to a broad program of Christian community service. Sometimes difficult problems of management and program arise when this equipment is provided in a building separate from the church. In some instances, however, the community hall as a separate enterprise seems quite necessary, and in such a situation, of course, the church will render the best possible unselfish co-operation.

Table of Minimum Standards for the Smaller Church Building

1. There should be not less than three rooms in addition to the auditorium. Have a minimum of five rooms if possible. It is a bad mistake to fill the entire building, no matter how small, with fixed pews. The smallest building should be divided by lath and plaster partitions into at least four rooms.

2. Walls and floors as nearly soundproof as possible.

3. In at least three of the department rooms, provide fourteen square feet of space per pupil.

4. Provide proper heating, lighting and ventilation. Do not have pupils facing a glare.

5. If a basement floor must be used, same not to be more than three feet below grade and not left with bare concrete finish.

6. Arrange at least one room with adjacent kitchen, stage, and dressing rooms for special gatherings of church and community.

7. The best possible sanitary and drinking facilities, with fixtures of proper height.

8. Plan built-in cabinets for care of books, supplies, etc.

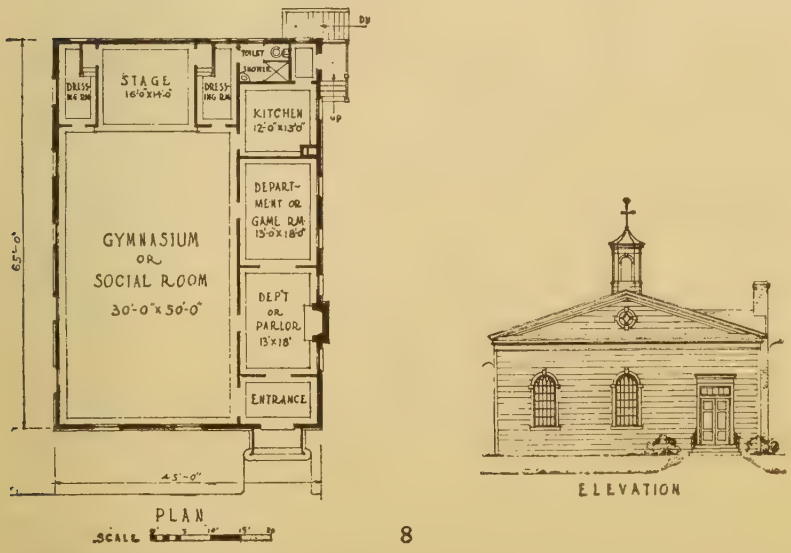
9. Make provision for wraps, etc. Never make it necessary to take overcoats, etc., into rooms where services are being held.

10. Have walls and woodwork carefully planned as to color schemes and general æsthetic values.

11. Plan for proper hangings and pictures. Eliminate all unsightly objects.

12. Have bulletin boards, attractive and legible.

13. *Make provision for small children.* As there was no



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Suggested Floor Plan for Parish House or Addition to Small Church

room in the inn for the infant Lord Jesus, so in many country churches there is no place for the young child. A nursery room is important. It will be the Cradle Roll headquarters. Children will be cared for during church services. Have a corner or alcove for cribs.

14. Employ competent architectural service for the smallest building.

Remodeling and Enlarging

Some of the old one-room churches are of fine proportion and line and with some interior remodeling to conform with the demands for better services of worship are quite suitable for sanctuary purposes. The most favored plan of enlargement to meet the full ministry of the church is to construct a two-story addition across the rear. The first floor will have rooms with ceilings eight feet or eight feet six inches high for the elementary departments and classes (including the nursery department), parlor, office and lavatories. On the upper floor, where a high ceiling is possible under the roof construction, a fine, well-lighted and ventilated hall may be planned, with a kitchen at one end and platform and dressing rooms at the other. A dumbwaiter aids in carrying supplies to the kitchen. This is much better than a basement kitchen.

If the two-story addition cannot be afforded, then construct a one-story wing providing as many classrooms as possible, office, hall, and kitchen. Have the wing at the rear, if possible, to avoid breaking into the sanctuary. If it must be at the side, avoid tearing out the side walls and have a corridor between the auditorium and the hall. Build for efficient work in the vital weekly program rather than for the semioccasional crowd.

CHAPTER XX

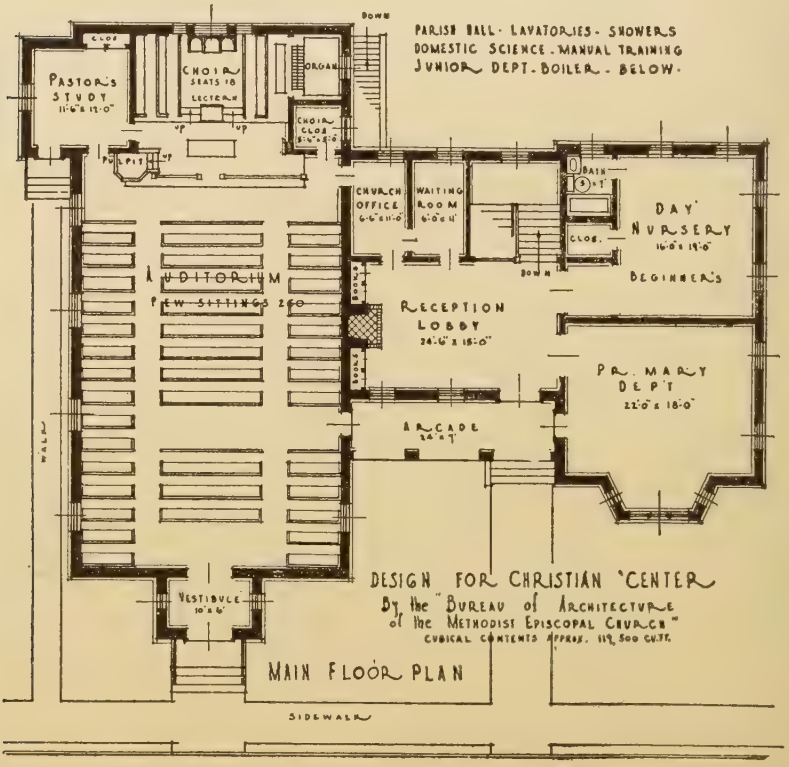
INSTITUTIONAL AND MISSION PLANTS—INCOME-PRODUCING BUILDINGS

In some sections, particularly in congested centers, there is need for church plants in which social service and educational activities require a large proportion of the space. Always, however, the sanctuary or chapel should be the finest part of the building. It need not be large in order to impress all who enter that it is the most honored part. Churchly ideals should control the entire design of the plant. It should not seem too coldly institutional. The problem has been worked out well in the Church of All Nations (Methodist Episcopal), Los Angeles, built under the direction of Dr. Bromley Oxnam. In this plant there are a clinic, hospital, boys' clubrooms, girls' departments, including assembly hall, class, clubrooms and domestic science department, also gymnasium and living quarters for workers. The sanctuary in this plant is so designed as to conduce to a reverential and worshipful atmosphere. It seems to influence the atmosphere of the entire building. The First Methodist Episcopal Church in Gary, Indiana, built in 1927, is an interesting example of the institutional church.

Remodeling for the Seven-Day-a-Week Program

Many existing buildings can be remodeled to enable the church to render a far more satisfactory program than has previously been possible, but remodeling of existing buildings is always a difficult problem, requiring special study in each case. It requires a great deal of patience and much added expense on the part of the architect to measure and examine all the existing construction and to

govern his planning by it. Before entering upon a remodeling program, the church should consider not only the first cost but the fact that after the work has been completed it will still be a remodeled old building. In many cases this is entirely worth while, while in others it would be better to determine upon an entirely new enterprise.



Floor Plan for a Christian Center

The Akron style of Sunday-school building can sometimes be remodeled and its usefulness greatly increased by flooring or bridging across the assembly space, thus providing a two-story building in the place of the one-story and gallery. Then the two floors may be divided

with soundproof partitions into department and classrooms as required. This has been done with pleasing results in the Trinity Methodist Episcopal Church, Knoxville, Tennessee. When the remodeling of a large church is contemplated, have an architect who is competent also as an engineer make a thorough study of the existing building, furnish him with a program of requirements and have him prepare a program for remodeling, illustrating the same by preliminary drawings. This service should, of course, be paid for whether the work proceeds on this basis or not.

The Income-Producing Plant

Sometimes, in order to maintain religious work in a city center where land values are exceedingly excessive, it seems necessary to devote a large part of the building space to income-producing purposes. We doubt whether there has been sufficient experience in this phase of church work upon which to base any dogmatic pronouncements either regarding its financial aspects or the value of its contribution to the religious life of the community. The First Methodist Episcopal Church, of Chicago, has erected a great office building, and from a financial standpoint it has been a decided success. Here, however, the church had an immense equity in land value alone of between three and four million dollars. This meant, of course, that the rental value of a modern building would pay an excellent dividend on the cost of the building itself. This enterprise is a tremendous income producer for church erection plans in the city and its suburbs. Other churches with limited equities might embark upon a similar enterprise and end in disaster. The Mizpah Baptist Temple, Syracuse, has found a hotel plant quite successful from many standpoints. However, the building was constructed at pre-war costs. The Central Methodist Episcopal Church, Detroit, seems to have a satisfactory arrangement. The income-producing space is confined to six shops on a valuable frontage and this limited space produces a very sub-

stantial income. The Central Methodist Episcopal Church, San Francisco, has planned a plant including a hotel and has leased the hotel building for a term of years to a hotel manager before giving the contract to construct the building. They have been able to reserve excellent space for educational and social work. In this plant a fine churchly sanctuary is constructed on the rear of the lot, but with a front entrance. There is no construction above the sanctuary. Its clerestory construction admits direct light and ventilation. It does not give the impression of being buried in a great business building. The German Evangelical Protestant Church in Pittsburgh has held the same plot of ground since 1787. It has leased a part of this for ninety-nine years. On this portion a business block has been built, but not so high as to prevent the new church on the corner dominating the block.

In some cases rather imposing church buildings have been masked by a business building of poor architectural character, constructed across the front of the block. This is unfortunate, particularly in cases where it seemed possible to build a business and religious educational building beside the church and allow the sanctuary to continue to impress itself upon the minds of the surging crowds. A building devoted to church purposes or erected by the church ought to be distinctive and impressive in its architecture. Mr. George E. Merrill, architectural secretary for the American Baptist Home Missionary Society, points out the fact that the dignity and appeal to the imagination which the church building makes is an asset of great value. Mr. Merrill also says, "No business can succeed without good management and good management cannot be had cheaply." There is a tendency among many churchmen to criticize and oppose the payment of salaries necessary for competent management. If the minister or his assistant is depended upon to manage the enterprise, the business affairs must compete with his more definitely religious ministry for his time and interest.

We have found instances where the church was about to turn over its equity to a promoting agency to construct the building and operate it. The danger in this arrangement is that the church is likely to receive the most undesirable space in the building for its religious work and may have little control of the character of the business for which space is to be rented. One church had no little difficulty with their rental agents who wished to lease space in the corridor for a cigar stand. On another church property a barber shop is opened on Sunday. The main purpose of the promoters, of course, is that of profit making. Dr. M. P. Burns, leader in city church work for the Methodist Episcopal denomination, says in his 1927 report to the Board of Home Missions of that denomination: "I have a fear that the income-producing plant will have an injurious effect upon the people and the community in which it stands, unless the official board in some way succeeds in winning the support of the entire membership for the regular and necessary programs of the church from day to day. Too often the members of such an institution think that the income from the property ought to pay the bills for the regular program, and the people go scot-free. Happy will such a church be whose board will take hold of this matter and work out a scheme of support that will captivate and compel the clientele to give of time, strength, money, and personal leadership to the limit of their strength. In this way the income from the property could be utilized to evangelize the city as a whole. With the proceeds of the property turned into correct channels, I can see how the income-producing plant may exert a tremendous influence for good on the community and the entire city." The church should squarely face many problems that will arise when a volunteer organization enters upon a business career. It must consider whether it would be better to put on a campaign for permanent endowment, sell the property and move to a new location, or grant a long-term lease of the business property.

CHAPTER XXI

BELLS AND TOWERS

The tower or spire is another feature of the church building that has moved poet and peasant to moods of admiration and worship. Bishop W. A. Quayle wrote: "A church spire is the most spiritual thing man has contrived. It is, therefore, the most poetical; for things spiritual are the highest form of poetry. Greek temples had no spires. Spires came with Christ. The irresistible poetry of Him ran along the veins of men like sunlight until when they came to build a place of worship out in the sunlight, far from the catacombs, unconsciously they flung their architecture into aspiration."[1]

The tower provides a note of climax in the design and emphasizes the upwardness of Christian aspiration. The architectural composition should be carefully studied so that it may take the most fitting position. Usually someone on the Building Committee urges that the tower be at the front "right on the corner." In some cases it is justifiable to place it so, but as a rule it is more pleasing when nearer the center of the design, forming a high note to which the eye is led by all the other elements or parts of the building. The nave and other sections of the building appear to better advantage when not hidden by a front tower. A significant design can be secured without a tower, and some buildings so designed are more expressive than others that have towers. A belfry or bellcote furnishes a pleasing feature when a dominating tower cannot be afforded. The fleche when well done is a pleasing feature in church architecture and should be used more frequently. There have been some unfortunate results, however, in

[1] *Methodist Review*, November, 1919. Reprinted by permission.

The Tower of the Church of the Saviour, Cleveland, Ohio
(Methodist Episcopal)

the use of both a tower and a fleche when neither dominated, both features seeming to compete for attention. Some may object to a tower on account of its cost, but if we spend money for music and pictures, we may justify the cost of the tower by its æsthetic values and the inspiration it provides, as well as its utility in bearing the bell or chimes.

The Church Bell

In late years fine sets of chimes have been donated to American churches, and thousands are blessed by the sound of bells. In any event, let every church have at least one bell, purchased from a reliable manufacturer, and carefully tested. To have a part in such a gift! Could there be a more beautiful and satisfying incentive to self-denial?

The use of the church bell is a fascinating subject for one who loves to search out the thoughts and feelings of Christian people of all lands. Walter's book, *The Church Bells of England* (Oxford, 1912), contains a bibliography of two hundred and fifty items. The use of bells in religious work is of great antiquity, dating back to 2000 B. C. These, however, were hand bells. In 600 A. D. the Pope ordered all churches to have bells. Canterbury Cathedral in 1110 had five. From 1550 to 1750 was the golden age of church bells. The bell is an important feature of church life in England.

A number of books have been written in England describing the very interesting history of church bells and many individual bells. Aside from the beauty of their music, many of the bells give in themselves a romantic touch to the history of the church. Cocks' book, *The Church Bells of Buckinghamshire*, is a volume of seven hundred and fifty pages describing the bells, with their inscriptions, of one single county. During the desecration of the monasteries in England, the bells of the religious houses composed a part of the booty. One monastery had to give up a ring

of ten bells. Many tons of bells and broken bell metal were sold and shipped from England. It is recorded that Henry VIII gambled away the bells of old Saint Paul's Cathedral, and the winner had them broken up and sold for the metal. Judging from the great number of bells confiscated and destroyed the title "The Ringing Isle" rightfully belonged to England. It was said that at no place in England could the devil escape hearing the sound of a church bell. Many odd and interesting inscriptions are found on the old church bells in England. An inscription found in many places is as follows:

"I to the church the living call
And to the grave do summon all."

Quite often the inscription praises the donor, for example:

"All you of Bathe that hear my sound,
Thank Lady Hopton's hundred pound."

Another reads:

"I call the living, mourn the dead,
I tell when days and years are fled;
For griet and joy, for prayer and praise
To heaven my tuneful voice I raise."

Bells were given various names and the times of their ringing were also designated. The ave bell was for morning prayers and the vesper bell for evening; the angelus bell commemorated the incarnation, and was rung three times a day. The sanctus bell, outside the building, was rung at the elevation of the Host so that the people round about would know of this period in the service. Many village churches in eastern Canada have sanctus bells in small belfries above the chancels in addition to the principal bells in the belfries at the front of the buildings. The alms bell was rung gratis for the funerals of the poor. The passing bell was tolled after death.

Bells have been highly prized in many lands. Victor

Trinity Church, Highland Park, Detroit, Michigan
(Methodist Episcopal)

Hugo likened the bells of Paris, breathing from flutes of stone three hundred feet high, to a great opera of steeples. Many have interesting histories. It is said that the army of Catherine was frightened from Sens by the ringing of the church bells. The bells of Saint Michaels, Charleston, South Carolina, have crossed the ocean five times. They came from England, were stolen and taken back by the British soldiers; discovered by a lover of the church, they were returned, and again they were taken to England for refounding.

The bell founders' window in York Cathedral commemorates their honored workmanship. Many families in England and other countries became famous because of their work as bell founders for several generations.

Bell ringing was recognized at various times in the church's history as a distinctive order in the service of the church. Charlemagne ruled that the clergy themselves must ring the bells. At other times the bell ringers were required to be able to read in order to make the responses in the service. In later times the bell ringers seemed to have degenerated into a more or less careless lot. John Bunyan found his membership in the bell ringers' ranks a hindrance to his spiritual growth and gave it up. Many sets of rules are found, often in poetic form, regulating the conduct of bell ringers. From one set covering six verses we quote the following lines:

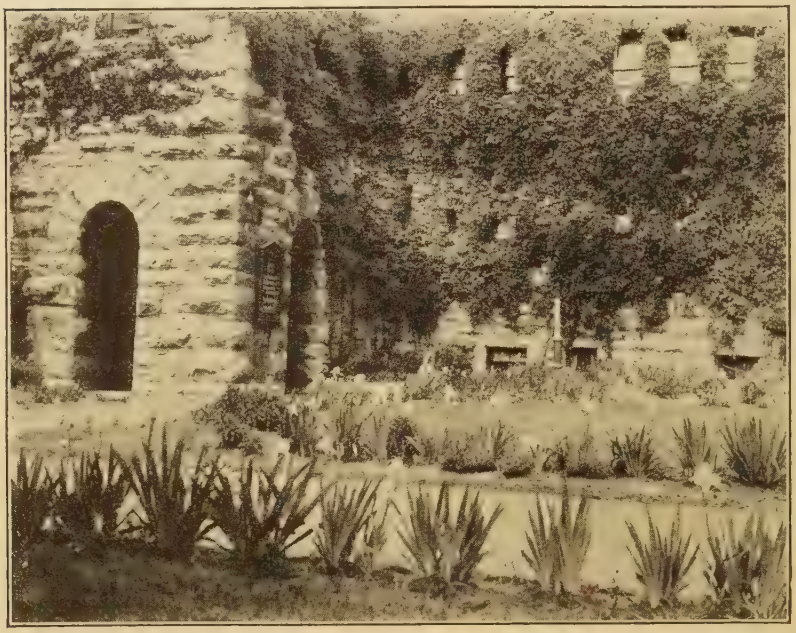
> "For every oath here sworn ere you go hence
> Unto the poor then you must give twelve pence,
> And if that you desire to be enrolled
> A ringer here, these words keep and hold."

Many sets of rules contained warning against swearing and cursing and required forfeits for wearing hats or spurs or laying wagers in the ringing room.

One is tempted to linger over this subject. Perhaps the deepest impression of the author's childhood, or the one most vividly recalled, is the sound of an unusually good

bell in the village church and it is his hope that we have forever ceased building the library style of church, or any style that denies childhood the sound of the church bell.

"When the bell sings out earth and heaven are but one landscape, and across it all shines the amazing radiancy of the smile of God" (Bishop Quayle).



Grace and Holy Trinity Churchyard, Kansas City, Missouri

CHAPTER XXII

THE NEED OF A CHURCH BUILDING POLICY

Our efforts in church building, insofar as any definitely directed policy is concerned, remain more or less chaotic and undisciplined, with no apparent controlling motive. Outside of the Protestant Episcopal, Lutheran, and Roman Catholic Churches there seems to be no general agreement as to the minimum requirements of a church building. We are prone to blame the architect for any defects—and, indeed, the church has suffered much from architects—but often the church itself has not been able to state its requirements intelligently. Nor, in many cases, has the architect been allowed freedom to solve the building problem.

Recognizing the Present Status of Our Church Architecture

The first step toward a general improvement in Protestant church architecture is to face the fact that while there are many commendable individual projects, as builders of the house of God we still have much to achieve. Unless one realizes the significance of church building in Europe and the sacrifices that have been made in the Old World by Christian and pagan for the temples of their God it is difficult to appreciate the situation. Many have a deplorable lack of perception of the high significance of the material expression of our faith. Conferences are held on church methods where the requirements of the house of God as the center and shelter of the activities are not mentioned. The tendency to materialize everything has influenced a subordination of the skill of the builder and the taste of the artist to a desire for cheapness and quick profits. The same grasping spirit that has produced in America,

a land with limitless space, its tenements and congestion, has too often subjected church building to the motives and ideals of the profiteer.

Particularly in the town and country has our church work suffered for lack of adequate buildings. The excellent progress in our religious educational methods has been nullified to a degree in places where it has been impossible to separate the school into departments and classes. During a recent study it was found that in two prosperous Eastern counties, with church property valued at more than a million dollars, only ten churches in the towns, villages and country had as many as five rooms each. Three out of five of the buildings had only one room. It was not surprising to find that effective work was being done at only a few points. One rural church authority says that three out of four rural churches have but one room, and too generally they are devoid of either dignity or beauty. The visitor from Europe must note the deep contrast between our churches and their parish and wayside chapels. The physical equipment of our churches is so very far short of the minimum requirements that a general improvement should be sought by methods more rapid than could be expected merely from gradual development.

The Denominational Bureau or Department of Architecture

Several of the denominations have established commissions, bureaus, or departments of architecture. These departments are manned by skillful architects who have a heart interest in the church and by others whose duty it is to promote the cause of better architecture. These agencies co-operate with the home mission, church erection, and religious educational workers in an endeavor to aid the local churches in solving their building problems in a way that will enable them to conduct the ministry now reasonably expected of the modern church. The Federal Council of Churches, particularly through the

commission on Social Service, under the direction of Dr. Worth Tippy, has rendered valuable aid to churches that seek to plan for a seven-day-a-week ministry.

The Church Should Lead in Cultural Advance

The church must be interested in the awakening of the community to an interest in better architecture generally. Society has the right to protect itself against ugly housing and to save itself from the mischief of avarice, ignorance, and crudeness. We have seen a marvelous development in public-school architecture. The factories where people work and the homes where the workers live are receiving attention. We are beginning to learn that man cannot live by bread alone. By a happy co-operation of talent, labor, and public opinion the buildings wherein people live, work, play, study, and pray may all be suited to their purposes and made to enrich the lives they shelter, becoming sources of health and happiness and an influence toward the thinking of sane and beautiful thoughts. The people generally can be brought to demand that the church in its material equipment and buildings shall equal in character and quality the other public institutions in the community. The time seems right for a general movement in this direction. The general conventions, state, synodical, or conference conventions ought to give a day to an intelligent and sympathetic consideration of the whole matter of art, and its relation to religion, and to the question as to whether decadence in Christian art and material equipment is necessarily concomitant with reformation. Fearlessly and without bias conventions should estimate the losses in spiritual culture and religious experience when the artistic accompaniments to worship and religious education are discarded. Definite provisions should then be made looking toward general improvement and a restoration of art to its proper place in the world as the handmaid of religion. The local churches must look to their full-time workers for the architectural leadership required.

The ministry, including directors of religious education and women workers, should be prepared to give needed stimulus and leadership to the cause of better church buildings. Leadership in church building and an intelligent appreciation of religious art should be important items in the curriculum of every theological school. Christian architecture should find a place among the cultural subjects of every college of liberal arts. A traveling fellowship in architecture would be an excellent aid for young ministers who are willing to devote their lives to the cause of church building. General programs for improving church architecture in America should include: study courses for our young people; lectures dealing with the subject in a practical way at young people's assemblies; lectures on religious art and architecture in the colleges; giving the subject of the building and its plan, design, and equipment the proper place at church conventions and conferences; articles on church planning in the church-school and religious press, and greater carefulness on the part of church erection boards to see that the buildings for which aid is required shall be adequately planned and well designed. Much has been done with encouraging results—enough to leave us without excuse if we fail to follow up the advantages already gained.

Architectural Style

If the church considers architecture seriously, it will soon raise the question of style. In what general order shall our heritage, our ideals, and hopes be expressed? Shall we invent a new and truly American style of architecture? One might as well ask shall we invent a new language? Architectural expression and style are a matter of growth, and as in language much that is added from time to time is slang and colloquialism, unworthy of a permanent position in the developing stream of expression.

We need a vitality in architectural design that will levy upon the good and true elements found in our American

architecture, and then, in the Gothic spirit—for no other seems adequate—work out an expression in architecture that will truly reveal the power, variety, idealism, unquenchable enthusiasm, and enlarging spiritual aspiration of an America redeemed from temporal materialism. This can come only out of such a life as the church should nurture.

Can We Have a New Crusade?

"God wills it! come on!" thus Peter the Hermit, appareled roughly, girded with a rope, holding aloft a wooden crucifix, stirred the people to an almost fanatical zeal for the crusade. Life and treasure were poured out to rescue an empty grave from the control of the infidel. We are thrilled at the romance of the crusades but we believe this generation has a Cause, calling for devotion, energy and sacrifice equal to that called forth by the crusades. For what cause can be nobler than to build the house of God whose thresholds shall be pressed by the little feet of thousands of children, within whose walls the people of God will find Christian fellowship, at whose altars the Divine Presence will be realized?

"I love thy church, O God!
Her walls before thee stand,
Dear as the apple of thine eye,
And graven on thy hand.

"For her my tears shall fall;
For her my prayers ascend;
To her my cares and toils be given
Till toils and cares shall end."

CHURCH BUILDING PROGRAM CHECKING LIST

It is advisable to prepare a checking list covering the various items of importance in connection with the building plans, arranged under appropriate headings. Many advantages accrue to this method of surveying the development of the plans. It is difficult to appraise a set of drawings in the total. To many a set of blue prints is more confusing than enlightening. The check list breaks the plans into small separate items so that everyone concerned may know what is provided and omissions may thus be guarded against. As has been said, one reason why some buildings cost more than was at first anticipated is that desirable and important features omitted from the original plans are added as extras; whereas all this should have been canvassed when the plans were still in their preliminary stage. The check list enables the building committee and architect to give an accounting in intelligible terms before the preliminary drawings are approved. The basis of the check list is the building plans program which is handed to the architect when he begins the work. The following list suggests some of the items to be considered when preparing the checking list. Many items on the list prepared by the committee may have to be omitted from the building plans but only after a consideration of their advantages.

I. *Site*—Location, accessibility, environment, restrictions, nature and condition, drainage, upkeep, size and form.

II. *Building or Buildings*—Position, location and exposure of rooms, approaches, entrances.

III. *Plans*—List of all rooms required, square feet of floor space in each; ceiling heights of elementary rooms, etc.; what rooms in basement?

1. Sanctuary—Capacity (at 18 inches per sitting) floors level; aisles straight; provisions for worship; glass program; illumination; ventilation; cloak rooms, choir rooms, etc.

2. Chapel—Capacity, chancel, windows, etc.

3. Administration—Church office, pastors' rooms, directors' rooms, church-school office; does main office command principal entrance to activities building? Supply room, fireproof vault, etc.

4. Church-school Rooms—Size, assignment (see page 121). All floors level.

5. Recreational and Social Rooms—Size, ceiling heights, floors clear of posts, dressing rooms, stage, dimensions of, lighting of, equipment storage, kitchen and equipment, kitchenettes, boys' club room; girls' rooms; quiet game rooms, reading room, radio room, bowling alley, handball court, church parlor.

6. Community Service—Day nursery, clinic, rest rooms, mothers' room.

7. Lavatories—Location, juvenile fixtures, non-freezing equipment; showers.

8. Built-in furniture, bookcases, closets, wardrobes.

9. Fireplaces, telephone booth, bicycle room, moving picture booth.

IV. *Architecture*—Style, consistency with style; design consistent in itself; distinctive as related to surroundings; in discord with surroundings? Sanctuary the dominant feature of the plant? Dignity, beauty, symbolism.

V. *Structure*—Foundation, wide footings, built in recognition of soil conditions. Walls; materials; dampproof; soundproof, etc.

Roof—Of variegated and graduated slate? If of manufactured materials, reports of tests? Copper valleys and gutters. Drain pipes? Snow guards?

Floors—If manufactured products, reports of tests? Stairways, width, number from each floor, juvenile height rails, center rails for wide stairways? All winders eliminated. Landings equal in width with longest stair tread? Two stairways from balconies? Lighting of.

Corridors—Wide enough to prevent congestion and allow easy circulation? Decoration of main corridors; lighting of.

VI. *Allocation of Floors*—Basement not more than three feet in depth for any educational and social rooms. Sanctuary not higher above grade than absolutely necessary. Main floor, for elementary rooms, office, parlor. Low ceilings in elementary rooms. Mezzanine floor where available space may be so used.

VII. *Service Systems, Conveniences*, etc.—Heating and ventilation, inspection of proposed systems; radiators recessed, temperature control, air supply.

Lighting, system and method of wiring, list of outlets, gas fixtures for emergency lighting.

Water supply, drinking fountains, juvenile fixtures, hot water equipment, lawn outlets.

Drainage system for building and grounds.

Sign or bulletin boards and lighting for same.

Janitor's shop, janitor's closets, print shop, sign shop, visualization equipment and outlets.

Fire protection equipment.

VIII. *Acoustics*—Proportions of auditorium, too wide for length? What proportion of area is sound absorbing? Thorough-going report of acoustical prospects.

IX. *Organ-chamber*—Dimensions. Floor and wall construction, sound pockets, access. Console location, size required. Blower room size, location, wind supply, extension possibilities, etc. Maker, guarantee, etc.

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